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ECONOMICS OF DEFENSE POLICY: ADM. H. G. RICKOVER

HEARING

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

NINETY-SEVENTH CONGRESS

SECOND SESSION

PART 6

COST ACCOUNTING STANDARDS, INDEPENDENT RESEARCH AND DEVELOPMENT, AND MISCELLANEOUS MATTERS

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(Created pursuant to sec. 5(a) of Public Law 304, 79th Cong.)

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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

JAN 20 1970

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

SUBJECT: HUMAN FACTORS

REF: (a) Proposed NAVMATINST - Human Factors dated 15 October 1969

Reference (a) which was forwarded to me for comment, is a proposal to establish and promulgate a HUMAN FACTORS PROGRAM on all Research, Development and Engineering Programs as well as Production Programs under the cognizance of the Naval Material Command.

My comments apply specifically to the work under my cognizance—design, development and construction of nuclear power plants. However, these comments are generally applicable to all shipbuilding.

It appears that the HUMAN FACTORS "program" is another of the fruitless attempts to get things done by systems, organizations, and big words rather than by people. It contains the greatest quantity of nonsense I have ever seen assembled in one publication. It is replete with obtuse jargon and sham-scientific expressions which, translated into English from its characteristic argot—where this is possible—turns out to be either meaningless or insignificant. It is about as useful as teaching your grandmother how to suck an egg.

Those who compiled the instruction demonstrate a lack of knowledge as to how work in this real world is actually done. They assume that engineers who design naval equipments have no awareness that these are to be operated and repaired by average human beings, and for this reason, they need the guidance of Human Factors "engineers". With the elucidations such "engineers" will give, the simplest everyday problem will become incomprehensible.

This proposal is typical of present day social "science" concepts—that one needs no detailed expertise in a given field; he can with little or no training or experience "solve" a problem by the exercise of his intellect and the use of concepts. This may be true in pure science; it certainly is not in engineering. To advocate the contrary demonstrates a lack of insight on how engineering problems are actually solved.

To implement the Human Factors "program" will require about as many additional people as are now engaged in doing technical work. New large organizations--a vast new social "science" bureaucracy contributing absolutely nothing to the building of ships--will have to be set up in the Headquarters of the Naval Material Command, in all the Systems Commands, and in contractor organizations. Should Human Factors succeed in its "objective" it will likewise succeed in stopping all useful work.

The proposed directive cannot be undertaken by rational persons interested in getting the job done; it cannot be accomplished; it will add another monstrosity to our already vast administrative burden; it will increase the cost of shipbuilding; it will make us a laughing stock.

I recommend that the Human Factors "program" be forgotten as fast as possible. There will of course be objections by those who by now have already established a vested interest beachhead, but the good of the Navy should prevail.

H. G. Rickover

cc:
VADM J.D. Arnold, MAT 09
RADM D.G. Baer, MAT 01
RADM N. Sonenshein, SHIPS 00
RADM R.C. Gooding, SHIPS 09
RADM J. Adair, SHIPS 01
CNO

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
08H-1451
4 MAY 1971

MEMORANDUM FOR THE COMMANDER NAVAL SHIP SYSTEMS COMMAND

Subj: Proposed "Zero Defects" Award for Norfolk Naval Shipyard, recommendation against

Ref: (a) NAVSHIPS letter 08-0602 dated 25 March 1971

1. On 29 April, 1971, Ships 08 received for review and comment from SHIPS 053 a letter from Commander, Norfolk Naval Shipyard which requested that Norfolk be nominated for a "Zero Defects Craftsmanship Award". NAVSHIPS Instruction 4120.16 provides for award of a Zero Defects Craftsmanship Award" . . . to a Naval Shipyard in recognition of sustained excellence of performance and outstanding improvements attained through a Zero Defects Program."

2. Most of the justification cited in support of a Zero Defects award to Norfolk Naval Shipyard deals with the extent of the shipyards participation in the Zero Defects Program and not with specific improvements. For example, the Norfolk request states that eighteen Zero Defects meetings were held during the past year and 4000 suggestions received, 235 of which were accepted. It points out the extent to which this program has been publicized at the shipyard including the publication of 12 Zero Defects digests, presentation of 34 Zero Defects awards and the election of a Mrs. Zero Defects who wears a sash and presides at the shipyard's official functions. Unfortunately, all this ballyhoo seems to be having little impact on improving the work done by the shipyard.

3. Reference (a) reported the results of a recent audit of nuclear work at Norfolk Naval Shipyard. This audit disclosed a number of recurring problems and pointed out that Norfolk Naval Shipyard has not taken lasting corrective action on deficiencies related to nuclear work. Reference (a) requested prompt management attention to assure substantive actions to overcome these problems.

4. Norfolk Naval Shipyard performance on recent nuclear submarine overhauls provides no evidence that the Zero Defects Program has reduced costs or improved ship deliveries. The USS SKIPJACK, originally planned as a 10 month overhaul at a cost of $7,475,000 actually took 20 months to complete at a cost of over $10,000,000. USS SHARK, originally planned as a 18 month overhaul at a cost of $18,943,000 is now scheduled to complete in 20 months at an estimated cost of more than $25,000,000. While some of these increases are due to additional work requirements identified after arrival of the ships at Norfolk, much of it is due to poor shipyard performance.

5. I have pointed out on several previous occasions the harm that is done by unwarranted praise of our naval shipyards through NAVSHIPS public relations program awards. I see no indication of "sustained excellence of performance and outstanding improvements" at Norfolk Naval Shipyard. The award requested implies low cost, high quality workmanship, or both. Such an award at this time would hinder efforts to obtain needed improvements in the performance of reactor plant work at Norfolk.

6. I do not concur that Norfolk Naval Shipyard should receive any Zero Defects Award. Furthermore, I recommend that NAVSHIPS Instructions be reviewed and modified as necessary to ensure that criteria for awards require substantive achievement as opposed to mere participation. I would appreciate being advised of the action you take in this matter.

H. G. Rickover

Copy to:

SHIPS 09
SHIPS 05
SHIPS 07
Commander, Norfolk Naval Shipyard

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

FEB 16 1972

Mr. Arthur Schoenhaut
Executive Secretary
Cost Accounting Standards Board
441 G Street, N. W.
Washington, D. C. 20548

Dear Mr. Schoenhaut:

Your letter of December 30, 1971, requested my comments on the proposed procurement regulation and contract clause for implementing uniform cost accounting standards, on the disclosure statement, and on the first two standards, all of which had been published in the Federal Register of December 30, 1971.

The procurement regulation, contract clause, and the first two cost accounting standards which you propose, appear satisfactory and in the right direction.

There was also a Special Notice in the Federal Register in which you requested comments on whether information submitted in disclosure statements should be made available to the public upon appropriate request. It is my belief that the public should have access to the information contained in disclosure statements. I understand that defense contractors want the Board to exempt disclosure statements from public access, contending that completed disclosure statements contain proprietary information which would hurt their competitive position. The disclosure statement shows how contractors charge costs to Government contracts, but not how much is charged to Government contracts. As such, I do not believe that a contractor's disclosure statement contains any proprietary information which would harm his competitive position if the public had access to it.

I note that legislation providing for the establishment of uniform cost accounting standards was enacted in August, 1970. At that time, Congress expressed the desire that the standards be established quickly, preferably within two years.

It has taken a year and a half for the Board to issue the first two cost accounting standards for comment. I think that work toward a complete set of uniform cost accounting standards should now proceed with a sense of urgency. I am concerned that the work may drag on interminably. We cannot afford to keep on spending defense dollars at the current rate without the verification and protection of uniform cost accounting standards.

If I can be of further assistance, please let me know.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
08Z-574
14 March 1972

MEMORANDUM FOR THE COMMANDER, NAVAL SHIP SYSTEMS COMMAND

Subj: Management by Objectives ("MBO")

Ref: (a) NAVSHIPS Route Slip, SHIPS 01AA to SHIPS 08, 18 January 1972

1. Recently I received a copy of the proposed NAVSHIPS Instruction 3010.2B, which establishes a management program to be known as "Management by Objectives" or "MBO". I note that this instruction supersedes the original NAVSHIPS Course and Speed memorandum, NAVSHIPS Instruction 3010.2A, but it states that Course and Speed will be continued as one of the "Command MBO programs" to be carried forward; further, the Cost Reduction and Incentive Awards Programs will be "aligned with and reported on in synoptic form via Course and Speed." The proposed instruction states that Course and Speed, and "similar programs in many NAVSHIPSYSCOM field activities," have been "successful and beneficial applications . . . . substantial steps have been taken toward resolution of many long-standing problems and adverse conditions that have constrained the command's performance." Reference (a) requests my comments on the proposed instruction.

2. In my view, the proliferation of such efforts as Course and Speed, Cost Reduction, Value Engineering, and other sterile "MBO" programs should be avoided. The administrative and public relations aspects of these activities divert our attention from the real tasks facing this command. Further, these programs have a negative impact on the development of our younger employees. We are teaching people the art of writing comforting reports rather than the skills necessary to get a job done.

3. Millions of dollars' worth of shipbuilder claims, material waste and nonproductive labor at our shipyards, repeated failure to administer contracts properly -- these are ample evidence that our current systems are not working. I cannot see how devoting time and talent to secondary efforts such as "MBO" can help us find the key to correcting these major problems. I would suggest that a more effective way to improve NAVSHIPS would be for every employee to concentrate on the Command's primary mission by assuring the best possible vendor performance and vigorously

inspecting contractors and field activities. Further, those of us with long experience must accept the responsibility of training the subordinates who will succeed us. If NAVSHIPS sets out to do these jobs properly, I do not think there will be much time left for "MBO" programs and the like.

4. For the above reasons, I recommend that the proposed instruction not be issued. In any event, it should not apply to matters under my technical cognizance.

H. G. Rickover

NAVSHIPS 01
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NAVSEC

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
28 June 1972

MEMORANDUM FOR ADMIRAL I. C. KIDD, JR., USN

Subj: Weapon System Reliability

Encl: (1) Testimony on Naval Nuclear Propulsion Program before Joint Congressional Committee on Atomic Energy, March 16, 1967 (pages 83 to 89)

(2) Testimony on Weapon Systems Acquisition Process before Senate Armed Services Committee, December 9, 1971 (pages 505 to 510)

1. Rear Admiral Sonenshein sent me a copy of his 23 June 1972 letter which replied to your letter of 2 June 1972 concerning the need for improved weapon system reliability. My comments on this matter, based on my experience in designing and building naval nuclear propulsion plants in which reliability is of paramount concern, may be of interest to you.

2. In my opinion, unless and until the Navy takes action to reverse the trend toward decimation of its technical capability in favor of a burgeoning administrative bureaucracy which fuels itself on an overabundance of management techniques and procedures, there will be no progress on the weapon system reliability problem. Promulgation of more procedures and more techniques will not correct the fundamental problem--the need to strengthen the Navy's in-house technical capability. Considering the present situation in the Navy, preparation of ever more procedures and techniques will lead to even lesser reliability because senior officials may be lulled into actually believing the problem will be corrected by these paper systems.

3. Some procedures and techniques are necessary in performing technical work, but written instructions are no substitute for technical competence. During the more than 30 years I have been responsible for technical development projects, I have observed and commented on the decline in the Navy's technical capability relative to the job to be done, particularly since World War II. I have repeatedly warned senior Navy officials of the futility of substituting management systems and administrative layers for in-house technical capability. I have observed the elevation of qualified technical people to non-technical management jobs or their departure from the Navy. Until the Navy corrects this inability to obtain and retain technically competent people, there will be no solution to the problem of weapon system reliability.

92-784 O - 82 - 2

4. On several occasions I have testified in detail to Congress concerning the decline in the Navy's technical capability. Enclosures (1) and (2) are portions of my testimony which may be of interest. In particular, I invite your attention to the 6th through 9th and to the 11th recommendations of enclosure (2) which I made to the Senate Armed Services Committee.

5. Those who conclude that reliable weapon systems can be achieved by issuing more procedures and more directives appear to anchor their faith in manipulation of the symptoms instead of diagnosing the malady and curing the disease. They establish rules, not values.

H. G. Rickover

H. G. RICKOVER

Copy to:
Commander, Naval Ship Systems Command

NAVAL NUCLEAR PROPULSION PROGRAM---1967-68

HEARINGS

BEFORE THE

JOINT COMMITTEE ON ATOMIC ENERGY

CONGRESS OF THE UNITED STATES

NINETIETH CONGRESS

FIRST AND SECOND SESSIONS

ON

NAVAL NUCLEAR PROPULSION PROGRAM

MARCH 16, 1967

FEBRUARY 8, 1968

Printed for the use of the Joint Committee on Atomic Energy

ENCLOSURE 1

Deficiencies in Navy's Ship Design Capability[1]

If I am to cover all the things you have asked me, I had better move on to the issue of submarine design Chairman Pastore asked about.

It has been obvious to me for some time that submarine design is going the way of practically all design in the Navy Department.

I was on duty in the Bureau of Ships during most of World War II. I was responsible for all design, procurement, installation, and maintenance of electrical equipment in the Navy. The Navy was not so complex an organization that its technical problems could not be handled well by the in-house capability we then had. We were given adequate authority and we did our job.

But with the vast increase in technology since World War II the Navy has gone downhill technically. This has been accentuated by new management procedures which have been instituted. It is estimated that every 18 months the need for computers in this country doubles, and my own experience in nuclear power development shows that this is pretty well the case. I would say that in the last few years organization and administration requirements have also doubled every 18 months, so that the few of us who are left who can do technical work find ourselves engaged more and more in procedural and administrative matters, not technical matters.

Practically all my testimony today, outside of the first few minutes, has been concerned with other than technical matters. I have been talking about security and administration, about getting somebody to build equipment for the Navy, about getting the people in authority to understand the importance of nuclear propulsion. I have not been talking about my job. I have been talking about tasks other people should be doing. I think this is significant.

Changes from 1945 to 1960

In the 15 years following World War II—before the current civilian administration of the Defense Department took over—several changes took place which had a major effect on the Navy's capacity to do technical work.

The rate of development of technology increased rapidly, which required a much greater technical competence to carry out a successful weapons development than previously had been required.

At the same time the technical competence of the Bureau of Ships was declining rapidly due to the failure on the part of the Engineering Duty Officer leadership to recognize the steps that had to be taken to build and maintain a strong cadre of competent officers and civilians

[1] See pp. 170–172.

to control the increasing technical business of the Bureau of Ships. Further, many of the better qualified civilian Bureau of Ships employees were attracted to other pursuits.

The net result is that for the job to be done there was greater technical competence in the Bureau of Ships in 1939 at the outbreak of World War II than there is today.

The Navy failed to establish an organization staffed with relatively permanent technically qualified officers or civilians to think through and establish the technical requirements of the Navy. The Ships Characteristics Board, which nominally determined the Navy's ships characteristics, was established as a voting forum composed of short term transient officers who bore no responsibility for carrying out the work programs or for their success.

Contractors involved in the naval shipbuilding industry, devoid of responsibility for insuring satisfactory operation of the product, motivated by profit, and in general free from tight control by a technically strong Government agency, developed inefficient, expensive, and poor quality hardware.

At the time the current administration of the Defense Department took over, there was a dire need to reform the Navy's method of handling development, procurement, and maintenance of warships. The basic need was to establish groups of technically competent people with clear authority and responsibility for executing the various Navy programs, similar to the strong technical management approach that had prevailed in the nuclear propulsion program and later in the Polaris program. There was also a need for strong technical groups in the shipyards and industrial contractor organizations to carry out the technical development work under close technical direction from the Government headquarters organization. These needs were not being met.

CHANGES SINCE 1961

The Navy, obviously, had not done a very good job, so when the new Secretary of Defense took office, the Navy was, very properly, investigated and much was found to be in need of improvement. But, in my opinion, some of the changes being made are in the wrong direction. There are now so many administrative organizations that the few remaining technical people are spending nearly all of their time on administration.

I remember having a discussion with the Chief of the Navy's Bureau of Aeronautics in 1948. He told me that his Bureau had representatives on 203 committees. I asked him why all this was necessary, didn't attendance at all the meetings keep his technical people from doing technical work? He replied: "I have to do this in order to avoid being in the position of having decisions made in my area of responsibility without my knowing about them and without consideration of the relevant technical factors." This is the very same reason I must devote so much of my own time and that of my leading technical people to administration—to the detriment of our technical work. I firmly believe that many of our technical failures can be attributed to overadministration and lack of attention to technical detail.

New Department of Defense organizations have been set up and they have recruited many of their people from the small number of technical people who were still left.

IN-HOUSE TECHNICAL CAPABILITY

It appears that the present policy is that if you want to get a technical job done, you go to industry and they will do the job. The Government people are supposed to "manage"—not do technical work. Offhand, this sounds like a pretty good idea, but I can offer an answer to that. What I say will be backed by our contractors: We would not have had one successful nuclear propulsion plant if we had accepted what industry offered us. Industry itself will admit that. Therefore, it is absolutely essential, in my opinion, to have a strong in-house technical capability at headquarters if the job is to get done properly and at reasonable cost.

This was the lesson the Germans learned in World War II. Their army and their navy had been accustomed to depending on industry, and did not have much in-house capability. On the other hand, their air force, being new, had built a strong in-house capability, and could thus judge and oversee their industry. That is why the Germans in World War II took the lead in aircraft design.

The same is true today. It is my opinion that the lead we have in nuclear propulsion is because we have a strong in-house capability. I am sure the committee knows something about this.

DIFFERENCE BETWEEN ADMINISTRATOR AND ENGINEER

There is an essential difference between the nontechnically trained or experienced administrator and the engineer. Administration is necessarily based on the law of averages. The pure administrator learns how people will act "on the average" and he makes descisions accordingly. Therefore, he can be promoted to ever higher positions and continue to use the "law of averages." The engineer on the other hand cannot be governed by statistical averages. Each decision he makes is concerned with a specific item. That item must work. It is not enough that such items will work "on the average." Therefore, the effective engineer, if he is to do an adequate job, is condemned to being concerned with details. A single apparently minor detail can wreck a major project even though all the other parts work. This constant attention to detail is a prerequisite -the hallmark—of an engineer worth his salt. The engineer's product either works or it's "junk."

The whole tendency of the Navy is to do away with technical expertise, and to have the remaining people become "managers." This came forcefully to my attention a half year ago when I started looking in detail into the nonpropulsion areas of the NR-1 design. I found that the Naval Ship Systems Command did not have even one person assigned full time to the nonpropulsion aspects of the NR-1, regardless of the fact that the NR-1 will be the deepest diving nuclear submarine ever built. The people who know about submarine design had been assigned to administrative organizations.

I wrote a rather forceful letter, and I got two people assigned responsibility for the nonpropulsion aspects of the submarine. I also

discovered that had I allowed the NR–1 nonpropulsion plant design to continue the way it was proceeding, failures would quite probably have occurred. This further illustrated that considerable improvement was needed both in industry and in the Navy in submarine design capability.

For man to take full advantage of modern technology he must raise his standards of knowledge and performance. The high temperatures, pressures, and speeds needed today require the use of materials close to their ultimate limits.

Therefore, utmost care must be taken in design, manufacture, installation, and operation. No carelessness can be tolerated anywhere in the entire chain—or the result may prove disastrous. Every person involved must constantly bear in mind that he personally is responsible for the entire ultimate result. Advertisements and statements claiming that the particular organization has an effective so-called zero defects program should be recognized for what they are—"motherhood" and propaganda statements. These are the sort of words administrators, who have little, or no technical competence, or experience love to use. They tend to delude the workers and the customers as well as those who make the claims. In this way they detract from meaningful effort. It should be a mandatory requirement that every administrator be made responsible for personally directing in detail one of his projects. This would immediately show him the human and material pitfalls involved. He would not be able to sit at a desk issuing orders and reading reports without understanding their real meaning. The only way to obtain the kind of quality that is essential today is for each person involved to understand what he is doing, and to recognize the consequences of failure. He must dedicate himself to do the job as if his own life depended on it and not rely on self-serving cliches.

DEFICIENCIES IN SUBMARINE DESIGN CAPABILITY

Once, at a meeting with engineers from industry, they recommended to me that I ease up on a certain requirement. I asked them: "If you knew that your son had to serve in that submarine would you design it my way or your way?" This question shook them. They agreed at once that my way was the right way.

However, the way things are going, the technical proficiency of the Navy is being reduced every day. If this trend continues, and the Russians take advantage of it, they may get ahead of us in nuclear submarines. That is my opinion and I will stick to it. I am saying this to the Joint Committee because you have had experience with my work. I have not given you much incorrect information. I cannot imagine the Russians handling their submarine design the way we are handling ours. I can't conceive of it. That is the point I wish to make to this committee.

EMPHASIS ON COST ANALYSIS

The senior officials in the Navy today are not adequately experienced in the technical aspects of weapons development and do not fully understand the approaches which must be used to successfully develop and operate modern weapons. At the same time, they are expected to make detailed decisions which affect all the basic elements of weapons

development. They are expected to explain and justify these decisions to higher authority in the Office of the Secretary of Defense. This has led to the technical people spending an increasing proportion of their time preparing justifications, and consequently having less and less time to devote to technical work.

The cost-analysts in the Defense Department are highly influential in the decisionmaking process. Any service recommendation which is to gain DOD support must be presented in a form which meets the criteria established by them. These analysts generally do not have technical expertise. They rely almost entirely on the concept that only those things should be approved which can numerically be shown to be "cost effective," where "cost" is generally confined to the very narrow scope of dollars, with particularly heavy emphasis on initial investment dollars.

BASIC MOTIVATION OF INDUSTRY IS PROFIT

Senior naval officials and the analysts in DOD often, in my opinion, display a naive attitude toward the capabilities and motives of U.S. industry to produce suitable weapons systems without the technical direction and badgering of strong military technical groups. To successfully carry out the development and operation of a new warship system requires a technically strong centralized permanent group within the Government, a group that has the authority and responsibility for executing the task. Only a Government group can provide the independent customer appraisal of the development work necessary to insure a satisfactory product. Appraisal from the viewpoint of customer responsibility for satisfactory operation and maintenance of the product is necessary to insure satisfactory product performance and the feedback of lessons learned into the design.

Industry does not—and cannot properly—have the responsibility for insuring a successful defense product. Industry is basically motivated by profit. It must, to continue to exist. Therefore, industry cannot be counted upon to do the job without close Government technical control. There is ample experience showing that industry does not want tight specifications and tight inspection.

LACK OF STRONG SUBMARINE DESIGN CAPABILITY IN THE UNITED STATES

The lack of a strong submarine design capability in the United States is one of the most important problems facing the Navy today, yet it doesn't even appear to be recognized. The investigation following loss of the *Thresher* should have made this abundantly clear to everyone. Yet it didn't. All that was done was to spend several hundred million dollars in the "SUBSAFE" program to patch up the mistakes of the submarine designers in going to deeper, faster submarines than they were used to. Nothing was done to establish a technically stronger submarine design organization to meet ever-increasing new requirements. If anything, submarine design is less controlled technically today than it was when the *Thresher* was designed. The status of the nonpropulsion areas of NR–1 is ample evidence of the state of U.S. submarine design capabilities.

COST STUDIES VERSUS TECHNICAL WORK

Senior naval officials, not being experienced in technological development, and faced with having to justify all their recommendations in detail on a dollar cost basis, have turned to reorganizing the Navy Department in a direction that will produce for them the paperwork studies necessary to gain approval of service programs. Their attention is directed to cost studies—not solid technical work. The Secretary of the Navy and the Chief of Naval Operations are surrounding themselves with analytical groups staffed with officers and civilian analysts who also have little or no technical expertise.

DOWNGRADING OF TECHNICAL PERSONNEL

The technical bureaus who formerly made most of the technical decisions and whose chiefs formerly reported directly to the Secretary of the Navy, now find themselves with two bureaucracies interposed between themselves and the councils of the Secretary of the Navy. Both of these bureaucracies—the Office of the Chief of Naval Material and the Office of the Chief of Naval Operations—are headed by unrestricted line officers and are staffed with high-level administrative groups who delegate their responsibilities for executing technical work. Further, many of those few remaining highly competent technical personnel in the officer and civilian groups of the former technical bureaus are being transferred from the Bureau technical work to administrative work in the Office of the Chief of Naval Material and the Office of the Chief of Naval Operations—while responsibility for executing the work remains in the Systems Commands which have replaced the Bureaus.

Thus, today, the technical people in the Systems Commands have been reduced in status, have been deprived of most of their authority, have had many of their best people ordered or attracted away from them to handle senior administrative positions, have had their voice in the councils of the decisionmakers muted, but have been left with the responsibility for executing the technical work.

Too many layers of administrative groups are being established between the technical people responsible for carrying out the work programs and the people making the decisions on what work is to be done. The technical groups, both officer and civilian, are being allowed to atrophy without replacement.

The present trend must be turned around without delay or the Navy's technical programs will be headed for difficulties—it may already be too late. It takes many years to develop a technical capability; it takes but a short time to liquidate it. If the Navy is to succeed in meeting its technical commitments it must run its business so as to attract and retain technical talent both in its own organization and in the organization of its prime contractors.

TIME REQUIRED TO GET NEW PROJECT APPROVED

Too much time is required between inception of an idea for a new submarine or other weapons development and authorization to proceed with construction. Under current administrative rules, any project

over $100 million lifetime cost—which includes all new design submarines—must endure several years of studies and and examination at many levels of the Department of Defense before a decision is finally made as to whether or not the project should be built. The consequences of such a policy in terms of delaying introduction of new submarine designs to the operating forces, discouraging introduction of new ideas at low levels, and potential large accrued cost during the drawn out "study" phases appear obvious. In my opinion, the new naval reactors projects such as NR-1 [classified matter deleted] SSN would still be in the decisionmaking phase and be years later in delivery had I followed the current Department of Defense thinking on this subject.

INCREASED STATURE AND AUTHORITY FOR TECHNICAL GROUPS NEEDED

It is essential to the future welfare of the Navy that top Navy and Department of Defense management attention be placed on increasing the stature and authority of the technical groups charged with the responsibility of executing the Navy's technical work. If the current assumption that this work can be successfully turned over to industry is allowed to endure, the Navy will soon find itself exhausting its energy and finances to patch up the unsuccessful technical products it will receive from a loosely controlled industry. The Navy is just now starting to recover from its loosely controlled [classified matter deleted].

[Classified matter deleted] the expenditure of hundreds of millions of dollars in the [classified matter deleted] program.

WEAPON SYSTEMS ACQUISITION PROCESS

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES

UNITED STATES SENATE

NINETY-SECOND CONGRESS

FIRST SESSION

DECEMBER 6, 6, 7, 8, 9, 1971

Printed for the use of the Committee on Armed Services

ENCLOSURE 2

SUMMARY OF RECOMMENDATIONS

The CHAIRMAN. Admiral, would you please summarize your recommendations on how to improve weapons systems acquisition?

Admiral RICKOVER. Yes, sir.

First, I recommend that the number of administrative levels in the Office of the Secretary of Defense and in the Navy which now review each action in defense systems acquisition be drastically reduced. We must end the present practice of everybody reviewing everything. There are many different ways this could be done. Almost any of them would be better than the present way. Given the importance of maintaining civilian control over the military and at the same time having a proper military influence on defense systems acquisition, it is probably necessary that each major action be reviewed by one military and one civilian level. The present system should be changed with the objective of providing only these two reviews prior to any individual matter reaching the decision level.

Historically, the solution adopted each time there has been major dissatisfaction with the performance of the services in some particular area has been to establish an additional administrative level over the area in question—rather than force the organization concerned to do its job properly or abolish it. This has led to a superfluity of staffs

which fial to contribute anything really useful to getting the job done and which, in fact, hinder it.

Second, I recommend that OMB and all comptroller organizations from the DOD Comptroller on down be gotten out of determining specific military requirements. It is not possible for the Government to staff the OMB or comptroller organizations in the DOD with enough people with the expertise needed to judge specific military requirements. Nor does it make sense to try to devote the time necessary to educate these analysts to the point where they can evaluate the need for specific weapons system. The comptroller organizations should stick to funding issues and should not get into the issue of whether or not any specific item is needed for our defense.

The OMB should concentrate on overall availability of funds and on improving DOD management. The way it is now, the OMB analysts try to second guess people in the DOD on which weapons are actually needed, even though they are not qualified to do so. Meanwhile they virtually ignore their proper job of providing an overview of defense management. The manner in which our defense is managed is of such vital importance to the country that, once OMB gets into this area, the results of their efforts should be reviewed thoroughly by Congress before final decisions are made.

Third, I recommend that the duplicate functions in the offices of the Assistant Secretaries of Defense and the Assistant Secretaries of the Services be eliminated. One possibility is to eliminate the staffs of the Director of Defense Research and Engineering and Assistant Secretary of Defense for Installations and Logistics. The Service Assistant Secretaries in these areas would then be the principal assistants of the Director of Defense Research and Engineering and of the Assistant Secretary of Defense for Installations and Logistics.

Fourth, I recommend elimination of the position and staff of the Assistant Secretary of Defense for Systems Analysis. Systems analysis, which has a proper place in the determination of what military systems are needed, should be done within the staffs of the services and of the Joint Chiefs of Staff, where the analytical results can be properly melded with operational experience and technological considerations. The present setup has the tail wagging the dog.

Fifth, I recommend that we go to a budget period of at least 2 years for operating funds, and longer for weapons acquisition to reduce the frequency of reviews of any given item. The present system results in re-reviewing every item several times each year and is unworkable.

Sixth, I recommend that a permanent group in the Navy be set up which would be responsible for specifying the military and support requirements of naval weapons systems and would have no other duties. The head of this group should report directly to the Chief of Naval Operations. The group should be composed of military and civilian personnel highly qualified in operational aspects of naval weapons and in technological capabilities. Personnel should be assigned for long tours of duty.

The talents of highly trained people, applied over a long period of time, are needed to determine the requirements for future weapons systems—to assess properly the threat which must be met, and to project the capabilities which will have to be developed to counter this

threat. While the new group should obtain advice from any knowledgeable source, its vital functions should under no circumstances be turned over to either a systems analysis group, or a contract organization, or a "think tank." The proposed new group should be the focal point for pulling together all of the factors, information, and analyses which must be considered to determine our naval requirements. It should be prepared to present all alternatives considered, and justify the requirements specified, to those authorities who must have this information to make final decisions.

Seventh, I recommend that the Office of Program Appraisal in the Office of the Secretary of the Navy be gotten out of submitting recommendations on military requirements. Any talent there may be in this Office which could contribute to developing better recommendations to the Secretary of the Navy on military requirements should be assigned to the Chief of Naval Operations. This will enable the CNO to give better military advice to the Secretary of the Navy. As now constituted the Office of Program Appraisal provides military advice directly to the Secretary of the Navy, advice which is often contrary to the military advice of the Chief of Naval Operations. The information it prepares is not subject to the checks and balances inherent in a full review of the Office of the Chief of Naval Operations; nor do those making the recommendations have any responsibility for executing the programs. The Office of Program Appraisal is not even required to inform the CNO of the recommendations it makes to the Secretary of the Navy.

Eighth, I recommend that the "bi-linear organization" in the Navy be restored. That is, the Chief of Naval Operations be held responsible for operational matters and for the determination of military and support requirements; and that responsibility for development and procurement of Naval weapons be assigned to a separate group whose head would report directly to the Secretary of the Navy. The procurement organization in the Navy should be restructured to eliminate either the Office of the Chief of Naval Material or the present systems commands. If there is to be a Chief of Naval Material, he should not have a separate staff superimposed over the systems commands. His principal assistants should be those who now hold the responsibilities of the systems commanders.

The person with the authority of Chief of Naval Material could be military or he could be an appointed or career civilian reporting directly to the Secretary of the Navy. In any case he and his principal assistants should be highly competent in a broad range of technical matters and eminently familiar with the capabilities and limitations of industry. Program managers in this organization should stay with the job until it is finished; if this is inconsistent with a military career then competent civilians should be trained to take over these functions.

Ninth, I recommend building up the in-house technical competence in the Navy's development and procurement organization. This is urgently needed to provide proper technical leadership and control over the sectors of government and industry developing, producing, and maintaining naval weapons. This is a difficult and long-term task which will require focused attention at top levels. Emphasis should be on the quality of individuals, not on numbers of people. Both officers

and civilians should be assigned to the top jobs, the only criterion for selection being their capability to do the job. Assignments should be of long duration.

Tenth, I recommend that the Senate Armed Services Committee Preparedness Investigating Subcommittee undertake a full-scale, in-depth, investigation of the long-range naval shipbuilding program. This matter urgently requires detailed consideration in order to establish a firm program based on a realistic appraisal of our needs and of what we can do to meet them. An adequate Navy is so vital to our overall defense that Congress should not delegate to any other body its constitutional responsibility to determine what our naval shipbuilding program should be.

Eleventh, I recommend that every organization and function which does not contribute directly to efficient support of the fleet be eliminated from the Naval Shore Establishment. There is a great tendency for large shore installations to become institutions in support of themselves. Such situations should be ruthlessly eliminated even though this may cause political or economic problems in a given geographical area. Keeping unneeded military installations open as a means of alleviating the political pressures of unemployment saps the strength of our military organization and reduces its capability to perform its primary mission—the defense of our Nation.

Twelfth, I recommend that the onus of solving the Nation's social problems be removed from the military. Even though the military must operate in today's environment, it must nevertheless maintain an effective force. It should therefore not be saddled with the additional administrative burden of attempting to correct the defects of our society. Too much time and effort is spent in these areas by the top people in the Department of Defense—time urgently needed to make certain the Department will meet our defense needs. The Department can best serve the Nation by performing its own primary task efficiently and economically; more resources could then be made available to agencies directly concerned with social matters.

Thirteenth, I recommend that the practice of longer tours of sea duty for naval officers in sea billets such as command be continued and expanded. With the ever increasing technical complexity of our ships and their weapons systems officers must remain in their jobs long enough to understand what they are doing and how to perform their jobs. Tours less than 3 years should not be permitted except where for urgent reasons an incapable officer must be replaced. Greater credit for promotion should be given to those who complete a successful sea tour in contrast to a shore assignment.

Fourteenth, I recommend that overall management control of the Naval Academy be vested in the Chief of Naval Personnel in Washington and not in the Superintendent of the Naval Academy, as has been the actual practice in recent years. The Chief of Naval Personnel, who is responsible for obtaining and developing the personnel needed to man our Navy, has the perspective needed to determine the training required of Academy graduates. The Chief of Naval Personnel should determine the curriculum, the academic and administrative standards, and all other aspects which ultimately determine the excellence of the graduate. The Superintendent's job should be to carry out these policies. These policies should be directed toward graduating officers

trained to operate ships and to understand the fundamentals of navigation, seamanship, and naval ordnance, aircraft, and machinery. A young officer also needs a basic amount of general knowledge, usually subsumed under the term liberal arts; in particular, history, geography, and a minimum fluency in a relevant foreign language. But as a young officer he does not need nor can he assimilate management, systems analysis, or similar courses. These, if considered necessary, can be studied in graduate courses after he has had several years' experience at sea.

We have too long allowed the various Superintendents to try their hands at making changes. Certainly, for the past 20 years each new Superintendent, with little or no experience in the field of education, has come to the Academy to try out his "ideas." This has led to the hodge-podge of courses—24 majors and some 500 electives—resulting in graduates ill-equipped to fulfill the needs of the Navy.

The Nation must rely on the Academy to produce a large percentage of our career motivated officers and unless these officers are properly trained, there is little use for the Naval Academy.

Fifteenth, I recommend that Congress, in its reviews of defense procurement inadequacies, and the General Accounting Office in its reviews, focus on the identification and correction of the root causes of the unsatisfactory performance of various elements of the defense bureaucracy rather than overemphasizing cost overruns, program status, and schedule delays. Every effort should be made to conduct these reviews in a manner which helps reduce the inefficiency—not increase it. It should be borne in mind that every time Congress or the GAO asks for a status report or a briefing on a program the information must be assembled by the working people and forwarded through the chain of command. This takes the working people away from their work and makes it even more difficult for them to do their jobs properly. It has been my experience that to request frequent and voluminous status reports does little to identify the real problems, but does much to tie up everyone in a mass of paperwork. Further, the present reviews generally concern themselves with the symptoms, not the basic conditions which cause them.

Sixteenth, I recommend that Congress see to it that defense contracting be revised as follows:

a. Rewrite the Armed Services procurement regulation so that procurement policies reflect the real situation wherein competition in defense procurement is the exception and not the rule. The rules of noncompetitive procurement, which provide additional protection to the Government, should apply to all contracts that are not formally advertised procurements.

b. Promptly issue uniform cost accounting standards for defense contracts. The progress of the Uniform Cost Accounting Standards Board in this regard needs to be speeded up.

c. Revise defense procurement regulations so that return on investment is used in establishing profits on defense contracts. Require defense contractors to report costs and profits upon completion of each order in excess of $100,000 regardless of the type of contract.

e. Strengthen the Truth-in-Negotiations Act by requiring contracting officers to obtain, and contractors to provide, cost data on all contracts in excess of $100,000 unless such contracts are awarded as for-

mally advertised procurements. Congress should prohibit waiver of the Truth-in-Negotiations Act for contractors doing in excess of $1 million of business with the Government annually.

f. Improve Defense Department surveillance of large defense contractors. This should be done, not by adding more people to already overstaffed Government offices, but by requiring closer scrutiny of contractors' technical and financial activities.

g. Strengthen the Renegotiation Act and make it permanent legislation. The Renegotiation Board should be required to carry out detailed audits of defense suppliers' books. Further, the Board's work should be subject to review by the General Accounting Office.

h. Require the General Accounting Office to undertake a comprehensive review of defense procurement and contract administration in lieu of the fragmentary approach that has characterized its efforts in the past.

i. Require the General Accounting Office to study the impact of the Industry Advisory Council and other industry groups on defense procurement policies, to determine whether the public interest requires additional safeguards in such arrangements.

j. Strengthen procedures to prohibit payments of any amount in settlement of a contract claim unless the contractor has demonstrated full legal entitlement to the amount claimed. Whenever it is necessary, the Department of Defense should obtain competent outside help—legal and technical—to defend itself against contractor claims against the Government. The Defense Department should refuse to deal with contractors who have a history of filing unwarranted or excessive claims. This may require additional legislation.

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DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
D8
Serial: 574
7 NOV 1972

MEMORANDUM FOR THE ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS)

Subj: Proposed Defense Procurement Circular Entitled, "Contractor Capital Employed Policy"; recommendation to revise substantially prior to issuance of

1. I have recently reviewed, in detail, the Defense Department's proposed new procedures to introduce return on investment as a factor in negotiating profits on Defense contracts. I found that the proposed procedures contain several fundamental defects. In my opinion the proposed procedures should not be implemented until they have been revised to correct these defects.

2. Specific deficiencies in the procedures are as follows:

a. The proposed Defense Procurement Circular gives contractors the choice of calculating profits under either the old or the new procedures. Obviously contractors will select whichever method results in the higher profits. As a result, the new procedures can only increase overall profits on defense contracts.

b. The proposed new profit schedule provides substantially higher profits on defense work. The schedule specifies the following profit objectives:

Type of Contract	Return on Investment
Cost plus fixed fee	20%
Cost plus incentive fee	24%
Fixed price incentive	28%
Firm fixed price	32%

In comparison:

(1) Fortune's 1971 survey of the nation's 500 largest industrial firms indicates the median return on investment (before taxes) was 13 percent.

(2) The Defense Department's 1969 profit study reported that contractors realized, on the average, a 15 percent return on investment for the 10-year period 1958-1967.

c. The proposed new profit schedule is structured around too high a base. As I understand it, the average profit for several segments of the durable goods industry during the past eight years was adjusted upward to arrive at the new Defense profit schedule. These upward adjustments were made to reflect the following:

(1) The Defense Department does not reimburse contractors for certain costs which are reimbursed by their commercial customers.

(2) The durable goods industry data is for actual or "coming out" return on investment. Historically, negotiated or "going in" profits have been somewhat higher than "coming out" profits.

However, there apparently have been no downward adjustments to reflect differences which substantially reduce the contractor's risk in defense contracts vis-a-vis non-defense work. For example:

(1) Most non-defense work performed in the durable goods industry is under firm fixed price contracts where the contractor bears the full risk of cost overruns. But in defense work only 23 percent is awarded under firm fixed price contracts; the government shares all, or a large portion of, cost overruns on the remainder.

(2) The Department of Defense finances most development costs through reimbursement of the costs of contractor independent research and development programs, or by contracting directly with defense contractors for research and development work. In commercial business the contractor generally funds much of this work himself.

(3) A large amount of technical spinoff from defense work benefits the company's commercial work.

(4) There is little competition in defense business, particularly for large military equipment. The contractor who performs the initial design and development frequently has a decided competitive advantage on follow orders. Because of this lack of effective competition, many large defense contractors are able to dictate prices to the Department of Defense.

d. The new procedures lack the essential safeguards which are needed to make return on investment a viable basis for determining profits. For example, the rules state that the value of undistributed facilities may be allocated "... on any reasonable basis that approximates the actual absorption of the related costs of such facilities." Pooled inventories are to be allocated "... on usage or other equitable basis."

Unless firm standards are established for calculating contractor investment, endless argument will result, and contractors with the more "imaginative" accounting practices will be rewarded with higher profits.

e. No provisions have been made for regularly collecting and evaluating actual profit data from defense contractors in terms of return on investment.

4. I agree there is a need for developing sound procedures for evaluating profitability of defense contracts in terms of return on investment. Since 1963, I have on many occasions testified to Congress about the continually rising prices of defense equipment. I have pointed out that:

a. The government is not receiving additional value corresponding to the continually rising prices of defense equipment.

b. The Department of Defense previously took it upon itself to substantially increase profits on negotiated defense contracts by about 25% through the introduction of the weighted guidelines method of determining profits.

c. Some defense contractors are making exorbitant profits under present procedures. For example, the most profitable company according to Fortune's 1971 survey of the nation's 500 largest industrial firms enjoyed a pretax return on net worth of 73.6 percent. However, over half the defense contractors whose profits were adjusted under the renegotiation process in Fiscal Year 1970 were left with a pretax return on net worth higher than 73.6 percent, after renegotiation. Many were left with over a 100 percent return on net worth; several received a return in excess of 500 percent, and one contractor received a 1,000 percent return on net worth. These high rates of return on net worth were achieved even though only one of these contractors realized more than a 25 percent profit on costs. While the above profit percentages on net worth are not calculated on the identical basis as the new defense profit schedule, they illustrate the high rates of return that are being made under present procedures.

5. I urge that the new procedures not be issued until the defects identified above have been corrected. In this regard, I recommend the following:

a. Delete the provision that makes implementation of the procedures during the trial period the sole option of the contractor. The trial should be designed to evaluate the reasonableness of profits presently being paid in terms of return on investment.

b. Revise the proposed profit schedule downward to reflect a more reasonable rate of return based on the nature of defense work and prevailing profit levels.

c. Add requirements that contractors report actual profits on a return on investment basis and set up a central file within the Department of Defense to collect and evaluate such data.

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6. I would appreciate being advised of what action you intend to take in this regard. I would be glad to assist you in any way I can.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Installations and Logistics)
Assistant Secretary of the Navy
(Financial Management)
Chief of Naval Material
Commander, Naval Ship Systems Command

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

11 November 1972

INSTALLATIONS AND LOGISTICS

MEMORANDUM FOR ADMIRAL RICKOVER

In your memorandum to me dated 7 November 1972 concerning the Department of Defense's proposed new procedures to introduce return on investment as a factor in negotiating profits on defense contractors, you suggested that the proposal contained several defects which, in your opinion, should delay the implementation of the proposed test.

The concept and the planned approach in the proposed procedure results from study and test efforts extending over a number of years. The draft that evolved from these studies was distributed in May to both Government and industry for comment. Opinions and suggestions for improvement have been sought from responsible and interested groups within government and industry.

The policy revision, long an objective of the Department of Defense and other government agencies, will be implemented by the issuance of a Defense Procurement Circular and be available for use on an optional basis for a test period that will continue as long as necessary to insure the logic of the final product. The option will require mutual agreement between the two parties and will give us an opportunity to closely examine the administrative feasibility of the proposal while undertaking several studies to be sure that the change is accomplishing its intended goals. This planned test period follows literally years of debate and discussion. We have now reached the stage when continued progress can be made only by moving forward on a controlled basis.

The intent of this modification of the procedures for developing prenegotiation profit objectives is most certainly not to either raise, or lower the aggregate earned profits of the defense industry. Rather, the intent is to alter the distribution of profit objectives in recognition of the varying levels of contractor investment. Such recognition can be a major step forward in removing current disincentives for contractors to make cost reducing investments, as well as making profit opportunity among contractors more equitable.

Because of the misunderstandings apparent in your memorandum, I believe it would be worthwhile for you to discuss this matter with the project officers, Bruce Benefield and Ron Floto. These gentlemen will be happy to provide you with a briefing on this subject at your convenience.

I am going to be away from the office for the next week. I will provide you a response in more detail on my return. Your interest is sincerely appreciated.

Barry J. Shillito

BARRY J. SHILLITO
Assistant Secretary of Defense
(Installations and Logistics)

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

INSTALLATIONS AND LOGISTICS

4 DEC 1972

MEMORANDUM FOR ADMIRAL RICKOVER

I was happy to note from your memorandum to me of November 7, 1972, that you share our interest in developing sound procedures for evaluating profitability of defense contracts in terms of return on investment. I also share your concern about the continually rising prices of defense equipment and believe that many of the controls and changes that have been introduced in procurement policy and systems acquisition will be instrumental in reducing the prices of defense equipment.

Contrary to your belief, I do not think that the facts support your contention that defense contractors are making excessively high profits. Using any yardstick -- profit to sales, profits to equity, or profits to total capital invested, however defined -- and using either GAO data or information published by the Renegotiation Board, it is abundantly clear that average defense industry profits are significantly less than the rest of American industry. This fact has been well established by independent and objective studies conducted by both the Logistics Management Institute and the General Accounting Office.

I believe that the Renegotiation Board statistics constitute a useful overall guide in judging the average profits earned in the defense industry on negotiated contracts. In my opinion, the statistics are enhanced for negotiated contracts because the floor and the exemptions tend to make the Board's data more meaningful. For example, the standard commercial article exemption permitted by the Renegotiation Board eliminates sales to the Government where prices are determined by commercial open market competition. The resulting statistics therefore more accurately reflect the area of profitability determined by the Government's contracting and profit policy. As you know, in recent years the Board has revised its reporting to identify the profits realized by type of contract. This action further enhances the usefulness of the information by permitting trend analysis which clearly indicates the reasonableness of average profits earned on defense contracts.

While it is true that the number of filings screened by the Renegotiation Board have been steadily rising, one would expect this with the growth of contract awards associated with the build-up of the Vietnam conflict. However, the number of profit refund cases made by the Renegotiation Board as a percent of the total filings screened remains relatively miniscule. For example, in 1971 the Renegotiation Board reviewed $51.6 billion of renegotiable sales, a record high in the history of the Board. Profit refund determinations in the amount of $65.2 million were made, an amount which was 0.12% of total renegotiable sales reported. Overall, in 1971 the average percent of profit earned on renegotiable sales was 2.5% before taxes, and approximately one-half this amount after taxes. Certainly such evidence does not support the conclusion that profits earned on defense contracts are above commercial industries at large. While isolated cases may be found indicating profit margins higher than the average revealed by the Renegotiation Board figures, it is important to note that the overall trend in earned profit rates for the defense industry has been downward for the last 10 years.

Your memorandum asserts that the proposed profit on capital policy will undoubtedly increase defense profits. This assertion seems to be based upon a comparison of the profit on capital factors contained in the proposed policy with data from the Fortune 500 1970 survey (Fortune, May, 1971) and 1958 to 1967 profit data contained in the Defense Profit Study (LMI, March, 1970). The range of alternative definitions of return on investment is so great that comparison of returns is apt to be misleading unless great care has been taken to insure that the ratios compared are defined in a consistent fashion.

I would like to point out the following differences that exist in the ratios that are contained in your memorandum, and upon which your assertion is apparently based:

1. Both the Fortune 500 (Fortune, May, 1971) and the Defense Profit Study (LMI) have deducted interest expense from the pre-tax profit. The profit factors in the proposed policy are profit before deducting interest expense. In 1971 the manufacturing firms reporting in the FTC/SEC reports incurred interest expense of more than 22% of net pre-tax profit.

2. The Fortune 500 figure is a one year median, the profit factor in the proposed policy is based upon an eight year average.

3. The Fortune sample is based upon the 500 largest industrial firms and therefore includes diverse industry sectors and only the larger companies. The proposed policy profit factors are based upon firms of all sizes in industry sectors akin to defense suppliers.

4. The Fortune and LMI rates are earned return on investment rates while the profit factors in the proposed policy are going in or objective rates.

5. The Fortune and LMI rates are based upon investment estimated by adding long term debt to equity while the proposed profit policy base is net assets, less cash and securities, accounts payable, progress payments, and all accruals.

In order to make a sound forecast of the initial impact of the proposed profit on capital policy, the starting point must be the prenegotiation profit objective. The prenegotiation profit objective for negotiated contracts is the focal point of our current proposal. It will not alter the give and take of the negotiating conference in which price is determined, nor will it guarantee, in any way, the eventual earned profit. All effects on earned profit, if any, will be indirect. In addition to starting with the prenegotiation profit objective, the analysis must focus upon the net impact on the aggregate of the prenegotiation profit objectives for the contracts to which the proposed profit on capital policy will apply.

We conducted an analysis of prenegotiation profit objectives using a statistically representative sample of 165 contracts from the FY 1970 negotiated procurement universe. This analysis disclosed that when the profit on capital policy is applied, the probabilities are overwhelming that the prenegotiation profit objective for a given contract will change; however, the increases in prenegotiation profit objectives in specific instances are offset by decreases of comparable size in other objectives so that the net impact on the aggregate is small. Based upon this test, our expectations are that fixed price prenegotiation profit objectives will increase slightly (.2% of costs) and that profit objectives for cost contracts will decrease somewhat.

Your memorandum states that the profit on capital policy lacks "essential safeguards" and cites our provision for "reasonable" and "equitable" allocation of capital to a contract as an example. I submit that reasonableness and equity are the only workable and effective measures of any

allocation process. Surely the government's interest would not be served by an attempt to develop a massive code of rules for the evaluation and allocation of capital to specific contracts. In fact, it is my judgment that one of the strongest aspects of the proposed profit on capital policy that we are testing is that it builds upon existing procedures, primarily those in use for overhead rate determinations, rather than creating a new maze of procedures. By relying upon the long established and continually improving procedures for overhead rate determination, and by requiring that all capital data and allocation bases be audited, we feel that the policy has the necessary flexibility to be workable, and at the same time, provides ample safeguards of the government's interest. We have been allocating capital to contracts in the form of depreciation for years. This policy requires no major changes in these procedures in order to be effective.

There is insufficient recognition in your memorandum of the fact that in moving ahead with the tests we are not abruptly changing the profit policy of the Department of Defense. Rather, we are embarking upon the next step in the development of a sound profit on capital policy that will accomplish the objectives for which it is intended. The profit on capital policy has been sufficiently studied over the past years to give us a high degree of confidence in its administrative feasibility and ease of use. However, because the Department of Defense procurement universe is an extremely large and complex one, it is my judgment that we must conduct a major operational test of the policy. It is only by doing this that we can determine whether or not our use of the overhead rate determination procedures is adequate, whether or not the procurement community can, with a reasonable amount of training and increased effort, implement the policy properly, and what, if any, additional modification of the mechanics of the policy are necessary for it to operate smoothly. At the same time, we will be able to ascertain more precisely what effects the policy will have on prenegotiation profit objectives.

During the test stage the number of contracts involved will be sufficiently small and our documentation adequate to give us detailed knowledge of every negotiation in which the profit on capital policy is utilized. From this information we will be able to make the judgments that I have described above. Applicability criteria, as well as the requirement of mutual agreement between offeror and government, shall be the means of restricting use of the policy during the test.

I hope that this memorandum places the upcoming profit on capital policy test in a better perspective, and eases some of the misgivings you may have regarding the policy. The policy is fairly complex, and is certainly not perfect in its present form. Nonetheless, as you and many others have pointed out, recognition of contractor investment in negotiating profit is a needed improvement in Department of Defense procurement practice. We can move further toward this much needed improvement only by conducting a major test of the policy at this time.

Barry J. Shillito

BARRY J. SHILLITO
Assistant Secretary of Defense
(Installations and Logistics)

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
08H-578
6 Dec 1972

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Higher prices and increased profits that will result from implementation of the Department of Defense proposed "Capital Employed Policy"

Ref: (a) My memo for the Assistant Secretary of Defense (Installations and Logistics) Ser 08-574 dtd 7 Nov 1972, subj: Proposed Defense Procurement Circular entitled "Contractor Capital Employed Policy"; recommendation to revise substantially prior to issuance of
(b) NAVMAT 00B memo 295-72 dtd 15 Nov 1972

1. In reference (a) I discussed the Defense Department's proposed new procedures to introduce return on investment as a factor in negotiating profits on Defense contracts. I pointed out specific deficiencies in the new procedures and recommended that they not be issued without substantial revision. A copy of reference (a) was addressed to you for information.

2. One of the deficiencies I pointed out concerned the proposed profit schedule. It provided for a 20 to 32 percent return on total capital for defense contracts. I pointed out that this represented a substantial increase over past profit levels, and was, in my opinion, too high considering the nature of the work.

3. By reference (b), you sent me the attached chart showing the results of the profit study which the General Accounting Office (GAO) conducted for the years 1966 to 1969. On that chart, you made special note of the 21.1 percent profit on equity capital figure which the GAO reported for defense work during that period. The 21.1 percent rate of return on equity capital is not comparable to the 20 to 32 percent profit on total capital provided for by the proposed new Department of Defense procedures. The basic difference is that total capital includes contractor borrowings in addition to equity capital.

4. The following table compares the results of past Department of Defense and General Accounting Office profit studies with the profit rates provided for in the proposed new Department of Defense procedures:

08H-578

	Profit Percent on Total Capital
Average profit on defense contracts 1966 to 1969 (GAO Profit Study)	11.2%
Average profit on defense contracts 1958 to 1967 (DOD Profit Study)	15.0%
Profit rate in proposed new DOD profit procedures	20 to 32%

I have recommended that the Department of Defense revise the proposed profit schedule downward to reflect a more reasonable rate of return based on the nature of defense work and prevailing profit levels. I want to be sure that you understand the basis for this recommendation.

5. I would appreciate any assistance you can offer in seeing that the proposed profit schedule is adjusted downward by an appropriate amount and that the recommendations I made in reference (a) are adopted. Otherwise, the Navy will end up paying higher prices for the same work.

6. I would appreciate being advised of what action, if any, you intend to take in this regard.

H. G. Rickover

GAO PROFIT STUDY
(74 FIRMS, 1966 to 1969)

CUSTOMER	SALES	PROFIT AS A PERCENT OF TOTAL CAPITAL	PROFIT AS A PERCENT OF EQUITY CAPITAL
DOD	4.3%	11.2%	21.1%
AEC. NASA, COAST GUARD	4.9%	15.0%	27.5%
COMMERCIAL	9.9%	14.0%	22.9%

SOURCE:
COMPTGEN REPORT TO CONGRESS, MARCH 17, 1971

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D C 20360

IN REPLY REFER TO
08H-2007
31 JAN 1973

MEMORANDUM FOR THE ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS & LOGISTICS)

Subj: Defense Procurement Circular Number 107 Entitled, "Contractor Capital Employed Policy"; comments and recommendations concerning

Ref: (a) My memo for the ASD(I&L) Ser 08-574 dtd 7 Nov 1972, subj: Proposed Defense Procurement Circular Entitled, "Contractor Capital Employed Policy"; recommendation to revise substantially prior to issuance of
(b) ASD(I&L) memo for VADM Rickover, dtd 11 Nov 1972, subj: Interim response to ref (a)
(c) ASD(I&L) memo for VADM Rickover, dtd 4 Dec 1972, subj: Detailed response to ref (a)

1. In reference (a), I pointed out several fundamental defects in the procedures proposed by the subject Defense Procurement Circular and recommended against implementing the new procedures until they had been revised to correct these defects.

2. Reference (b), your interim response to my memorandum of 7 November, suggested that, because of apparent misunderstandings in my memo, members of your staff would be available to brief me on the new profit procedures and stated that you would subsequently provide a more detailed response. In our telephone conversation of 11 November 1972, you indicated that the decision had already been made to go ahead with the new procedures. Since my views could have, therefore, no effect on your decision, we agreed there was no need for further discussions with your staff. Reference (c) is your detailed response you referred to in reference (b).

3. On 11 December 1972, the new procedures were issued as Defense Procurement Circular Number 107 (DPC 107), to be applied to solicitations issued after 1 January 1973. DPC 107 solicited suggestions for changes to improve the approach for determining pre-negotiation profit objectives.

4. The purpose of this memorandum is to recommend changes I consider necessary to assure success of the Contractor Capital Employed Policy in defense contracting.

a. In reference (a), I recommended that the trial of the new procedures not be conducted at the sole option of the contractor, but be designed to evaluate the reasonableness of profits paid in terms of return on investment. DPC 107 now provides that, during the trial period, the new procedures cannot be implemented without the mutual agreement of the contractor and the government. This is a substantial improvement. However, the trial is still

designed to provide experience only with firms that volunteer to use the new procedures. I recommend that those contractors who do not volunteer to use the new procedures be required to provide investment data, so that profits negotiated on major contracts under the present weighted guidelines procedures can be converted to return on investment, for comparison purposes.

b. In reference (a), I recommended that a requirement be included in the proposed Defense Procurement Circular for contractors to report actual profits on a return on investment basis, and that a central file be set up within the Department of Defense to collect and evaluate such data. It does not appear that DPC 107 makes any provision for the collection and evaluation of such data. In my opinion, the establishment of a comprehensive profit reporting system such as I have recommended is an important step that needs to be taken, so that we will have a sound basis for evaluating defense profits.

c. As I understand it, the average profit for several segments of the commercial durable goods industry during a recent eight year period was adjusted upward to arrive at the new Defense profit schedule. In this regard I have the following recommendations:

(1) As I pointed out in reference (a), the average durable goods industry profit should be adjusted downward to reflect differences which substantially reduce the contractor's risk in defense contracts vis-à-vis commercial work.

(2) Annually, the return on investment profit schedule should be updated, through the use of a moving average, to more nearly reflect current profit levels.

d. In reference (a) I stated that, unless firm standards are established for calculating contractor investment, endless argument will result, and contractors with the more "imaginative" accounting practices will be rewarded with higher profits. Your letter, reference (c), implies that general criteria, such as "any reasonable basis" and "other equitable basis" which are contained in the procedures, are acceptable; it further states that "reasonableness and equity" are the only workable measures of any allocation process. Similar arguments were put forth in defense of general language in the cost principles presently prescribed by the Armed Services Procurement Regulation. The General Accounting Office, however, has pointed out that such general criteria are inadequate. We now have a competent, fully staffed Cost Accounting Standards Board, whose job it is to develop appropriate cost and allocation standards for government contracts. I believe that their expertise can and should be applied to the new profit procedures to avoid potential areas of abuse. I believe the Board can provide expert advice relative to the adequacy of the operating and facilities capital allocation procedures. I therefore recommend that the new procedures be submitted to the Board for their review and recommendations. In this way you will have the best expert advice as to the adequacy of the operating and facilities capital allocation procedures, as well as to the other accounting aspects of the new procedures.

5. I support your efforts to devise a better method of establishing profit objectives for negotiated defense contracts--a method taking return on investment into consideration. However, I believe DPC 107 should be revised to incorporate the recommendations I have made above if the new procedures are to accomplish their stated purpose and if, as you have indicated, the Department of Defense does not want to increase overall defense profits. In summary, my recommendations are:

a. Those contractors who do not volunteer to use the new procedures should be required to provide investment data so that profits negotiated under the present weighted guidelines procedures can be converted to return on investment, for comparison purposes during the trial period.

b. Contractors should be required to report actual profits, on a return on investment basis, and a central DOD file should be set up to collect and evaluate such data.

c. The new Defense profit schedule should be adjusted downward to reflect the reduced risk in defense contracts vis-à-vis commercial work; and the schedule should be adjusted annually to reflect current profit levels.

d. The new procedures should be submitted to the Cost Accounting Standards Board for their review and recommendations.

6. I would be glad to discuss this matter further, if you desire.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Installations and Logistics)
Assistant Secretary of the Navy
(Financial Management)
Chief of Naval Material
Commander, Naval Ship Systems Command

92-784 O - 82 - 4

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

31 January 1973

INSTALLATIONS AND LOGISTICS

Admiral H. G. Rickover
Naval Ship Systems Command
Washington, D. C. 20360

Dear Admiral Rickover:

Thank you for your very thoughtful memorandum, this date, and for your thoughts on this subject as expressed over the telephone. As I see it, you and I are not too far apart on many aspects of this complex subject. DPC 107 (11 December 1972) does solicit suggestions, and yours are indeed most logical. I appreciate your support in the effort to recognize investment as a key ingredient in the construction of pre-negotiation profit objectives. It is my hope that my successor and the DoD staff responsible for developing the final product will move in the direction of greater recognition of capital. I will urge that my successor consider fully your letter of 31 January.

First, as regards data collection, we are taking steps to accumulate capital data on all contracts negotiated during the test period. Ultimately, should DoD adopt an approach similar to that being tested for general application, I believe we should move in the direction you have suggested in the development of a central DoD file.

Second, my staff has been in contact with members of the Cost Accounting Standards Board. These discussions have been most helpful. Since the profit policy follows the established cost accounting procedures, DoD will follow the improvements initiated by the Cost Accounting Standards Board. I would expect my staff to be in constant liaison with the Board, as well as any other government agency concerned with this issue.

Third, I fully expect a large number of our Defense contractors to volunteer to use the new procedures. Before requiring capital data on a mandatory basis, however, I would like to see how the present test period evolves using a "mutual agreement" approach. There is no question, of course, that once the DoD moves toward a final product, all required contractor investment data must be obtained.

It would appear that our major area of disagreement relates to risk. I agree that in some instances selected Defense contractors may realize extremely high profits on their capital investment. At the same time, I do not consider Defense industry to be a low risk industry. I have stated in public testimony on several occasions that every objective study that I have been able to review thoroughly convinces me that on the average Defense profits, using any yardstick, are lower than their commercial counterpart. The magnitude of risk exposure for many government contractors, however, is certainly equal to or far greater than that experienced by comparable commercial concerns. Often, of course, this depends upon the type contract entered into. I believe that average risk on the part of government contractors today is at least as great as commercial contractors. I believe this is reflected in recent Renegotiation Board data. For example, included in the approximately 4,200 contractor filings screened by the Board in FY 1972 were over 1,600 company filings which actually showed losses. On an overall basis total profits, after taxes, were well under 1% of sales. I am also convinced, based on an extrapolation of company data contained in past studies, that Defense contractor profits on equity and total capital investment have also gone down considerably in the past few years.

Again, as I leave this job, my sincere appreciation for all your assistance, and my thanks to you as a great American for the outstanding job that you have done for all of us in the overall interest of our national security.

Sincerely,

Barry

BARRY J. SHILLITO
Assistant Secretary of Defense
(Installations and Logistics)

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
08H-2012

22 FEB 1973

MEMORANDUM FOR THE ACTING ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS)

Subj: Defense Procurement Circular Number 107 Entitled, "Contractor Capital Employed Policy"; comments and recommendations concerning

Ref: (a) My memo for the ASD(I&L) Ser 08H-2007, dtd 31 Jan 1973, subj: as above
(b) ASD(I&L) ltr to VADM Rickover, dtd 31 Jan 1973, subj: Response to ref (a)

1. On 11 December 1972, the Department of Defense issued Defense Procurement Circular Number 107 (DPC 107), entitled, "Contractor Capital Employed Policy." DPC 107 introduces return on investment as a factor in negotiating profits on Defense contracts. DPC 107 solicited suggestions for changes to improve this new approach for determining pre-negotiation profit objectives. In reference (a), I recommended changes I consider necessary to assure success of the Contractor Capital Employed Policy in defense contracting.

2. Reference (b) is the Assistant Secretary's response to my memorandum of 31 January 1973. It noted that he and I were not too far apart on many aspects of this complex subject. However, it is not clear to me from reference (b) that this is the case:

a. Reference (b) states that members of the staff of the Assistant Secretary have been in contact with members of the Cost Accounting Standards Board, and that they will continue to maintain liaison with the Board. Such action is not the same as submitting the DPC 107 procedures to the Board for their review and approval, as I recommended.

b. Reference (b) makes no mention of my recommendation that the return on investment profit schedule in DPC 107 be updated annually, to more nearly reflect current profit levels.

c. Reference (b) states that, should DOD ultimately adopt for general application an approach similar to that being tested, DOD would move toward development of a central DOD profit file. I have recommended that the DOD establish a comprehensive profit reporting system now, without waiting for the results of the trial of the new procedures.

d. Reference (b) does not agree with my recommendation that the DPC 107 return on investment profit schedule be adjusted downward.

3. In reference (b), and in previous correspondence on this subject, the Assistant Secretary has referred to Renegotiation Board data as evidence that Defense profits are too low. As I have pointed out repeatedly in testimony to Congress, Renegotiation Board data is not reliable; the Board itself cautions against using its figures in generalizing about Defense profit levels. There are many loopholes in the Renegotiation Act, such that the largest Defense contractors are able to escape the renegotiation process altogether; other corporations can keep excessive profits on some contracts by averaging them with lower profits on other contracts; industry can report, for renegotiation purposes, almost whatever profit it chooses because of loose accounting rules. Further, Renegotiation Board data reports average Defense profits; in developing the new DOD profit procedures, however, consideration must be given to the profit negotiation on individual contracts. In short, Renegotiation Board data is unreliable and, in my opinion, irrelevant to the matter at hand.

4. I am encouraged to see, from reference (b), that the Department of Defense will accumulate capital data on all contracts negotiated during the test period, as I recommended. I believe this is an important step in being able to evaluate the impact of the new procedures.

5. I hope that my comments and recommendations will be useful to your staff in improving the new Contractor Capital Employed Policy for Defense contracts. To reiterate, my recommendations are:

a. The DPC 107 procedures should be submitted to the Cost Accounting Standards Board for their review and approval.

b. The return on investment profit schedule in DPC 107 should be updated annually to reflect current profit levels.

c. A comprehensive profit reporting system should be established in the DOD, without further delay.

d. The return on investment profit schedule in DPC 107 should be adjusted downward.

6. I would appreciate being kept advised of the action you take with regard to these recommendations.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Installation and Logistics)
Assistant Secretary of the Navy
(Financial Management
Chief of Naval Material
Commander, Naval Ship Systems Command

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

JUN 2 9 1973

Mr. Arthur Schoenhaut
Executive Secretary
Cost Accounting Standards Board
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Schoenhaut:

In a letter of June 28, 1973, Mr. McClenon of your staff requested comments on a draft Cost Accounting Standard concerning Depreciation of Tangible Capital Assets.

The proposed standard, which advocates those depreciation methods for contract costing purposes which approximate physical or economic deterioration of tangible capital assets, appears satisfactory and in the right direction. In 1969, the Comptroller General, who now serves as Chairman of the Cost Accounting Standards Board, requested, among other things, my comments on cost accounting for depreciation. In my reply to him, I advocated a position similar to that proposed in your draft Standard. At that time, I took the following position:

> "It seems to me that, from a cost standpoint, the most simple and equitable depreciation method for both industry and Government is the straight-line method. Under this method, assuming accurate estimates of the useful economic life of an asset, the asset cost is amortized over that life without the distortion that results through use of accelerated methods which have come into practice for other purposes. The situation could be improved considerably if contractors were required to use--in words from your questionnaire--that method of depreciation 'which most closely approximates the actual consumption of the asset rather than one preferred for its tax benefits or for financial reporting considerations.'"

I remain firm in my opinion that accelerated depreciation, which may be permitted for tax and financial accounting purposes, should not ordinarily be used for estimating, accumulating, and reporting costs for Government contracts.

If I can be of further assistance, please let me know.

Sincerely,

H.G. Rickover

NR:D:HGR: H# 7761

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
08H-2075

21 NOV 1973

MEMORANDUM FOR THE CHIEF OF NAVAL RESEARCH

Subj: Electric Boat Division Independent Research and Development Program for 1973

Ref: (a) Air Force Systems Command ltr dtd February 23, 1973, subj: Independent Research and Development Program - General Dynamics - Electric Boat Division, 1973
(b) Technical Plan for General Dynamics Corporation - Electric Boat Division - 1973 Independent Research and Development Program

1. Reference (a) forwarded reference (b) to several Navy research and development organizations and requested the addressees to submit comments to the Office of Naval Research concerning the relevancy of Electric Boat's proposed 1973 Independent Research and Development (IR&D) program to Department of Defense needs. Reference (a) stated that these comments are needed to determine, in accordance with Defense Procurement Circular number 83, the IR&D costs that are allowable as overhead costs for contracts with Electric Boat Division.

2. Electric Boat's proposed IR&D program for 1973 encompasses a long list of projects. Among them are projects dealing with corrosion of submarine piping and structural materials, welding techniques and concepts, use of computers for submarine systems design, and other submarine related technologies. The estimated cost of the 1973 program is $605,000.

3. Although nominally these projects appear to relate to Navy or Department of Defense work, I believe they are unnecessary, duplicative of other research efforts sponsored by the Government, or otherwise do not warrant financing by the Department of Defense. For example:

a. Project 73007026, Advanced Gamma Radiation Attenuation Design Concepts, concerns improving Electric Boat Division's capability for designing naval nuclear reactor shielding. However, NAVSHIPS 08 is responsible for the adequacy of reactor shielding on naval nuclear propulsion plants. Because NAVSHIPS 08 cannot control Electric Boat's IR&D work on reactor shielding, it is likely that this work would duplicate efforts already underway by reactor plant prime contractors working directly for the Navy. Therefore, project 73007026 should not be permitted as an allowable overhead cost for DOD contracts with Electric Boat Division.

b. Another project, number 73007002, HY-130 High Strength Steel Welding Processes, concerns developing procedures for welding HY-130 steel. As the Navy is currently coordinating and funding the development of welding procedures for HY-130 steel under the HY-130 Development Program, it appears that an independent parallel effort at Electric Boat Division to develop welding procedures for HY-130 is not justified.

c. Electric Boat states that project 73007039, Investigation of Piping Systems (Flexible Connectors), concerns developing an improved flexible connector for use in submarine piping systems. However, NAVSEC is currently supporting a program for improving existing flexible connectors and to develop new flexible connectors for submarine piping systems. Again, an independent parallel effort at Electric Boat Division to develop flexible connectors for submarine piping systems does not seem warranted.

4. In my opinion, the Department of Defense has not received its money's worth for IR&D expenditures at Electric Boat in past years. Consistent with current Defense Department IR&D policies, the taxpayer's money has been spent with essentially no strings attached and with no results required. The costs of Electric Boat's IR&D program are spread over all of its defense contracts, and no individual government organization is financially responsible for monitoring the contractor's performance. Furthermore, the Government has no authority to direct Electric Boat's IR&D work, and gets no rights to any products, technology or patents developed from that work, even though the Government typically has paid directly or in overhead about 98% of Electric Boat's costs.

5. Without close Government control, there is an incentive for companies to attempt using IR&D funds to begin development of new commercial products. I pointed out in 1969 that Electric Boat had budgeted $1 million for development of a commercial Arctic Submarine Tanker, that these costs were being charged to overhead, and that the Government was paying 98% of the cost of this program. The Government is challenging the costs which were charged off by Electric Boat as Bid and Proposal costs (a part of IR&D), but the matter is as yet unresolved.

6. In my opinion, the benefits received by the Government under the present IR&D system are not commensurate with the costs paid in overhead to the contractor. Moreover, faced as it is with a serious shortage of funds to do critically necessary research and development, it is inconceivable to me that the Navy would spend over $600,000 per year at Electric Boat to conduct the contractor's own research and development program. Our procurement and R&D dollars would be better spent on those programs where the Navy can control the work, than on projects which have uncertain military benefit.

7. If the Navy wishes to participate in Electric Boat's independent research and development program, I recommend it arrange for such participation by means of a direct contract with the company. Under this arrangement, the Government would receive the rights to inventions or data produced or developed by Electric Boat under the contract; it would have the ability to direct and control the work performed; and the costs incurred would be charged directly to the organization responsible for controlling the work. In any event, I do not consider that the potential value of the proposed Electric Boat IR&D program, under the conditions in which it is administered under present Defense Department policies, deserves Government support.

8. I do not mean to single out Electric Boat for criticism of its IR&D program; I suspect that similar criticism is warranted regarding other contractors' programs. However, I have not been asked routinely to comment on such other programs, even though I understand several contractors who are suppliers for the Naval Nuclear Propulsion Program are using research in various fields of nuclear technology to justify acceptance of IR&D costs. In the future, I would appreciate being given the opportunity to comment in advance on such programs if their costs are to continue to be allowed.

9. I would appreciate being advised of what action you take with regard to the above matter.

H. G. Rickover

Copy to:
Air Force Systems Command,
Director of Laboratories,
Laboratories Program Division

DEPARTMENT OF THE NAVY
NAVAL SHIP SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO
08H-2079

21 NOV 1973

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Contractor Independent Research and Development

Encl: (1) SHIPS 08 Memorandum for Chief of Naval Research, 08H-2075 dtd 21 November 1973, same subject

1. Enclosure (1) is a copy of my memorandum to the Chief of Naval Research commenting on Electric Boat Division's Independent Research and Development (IR&D) Program for 1973. It points out specific examples of Electric Boat's proposed IR&D projects which I believe are unnecessary, duplicative of other Government sponsored research, or otherwise do not warrant financing by the Department of Defense. In my opinion, the Navy has not received its money's worth for IR&D expenditures at Electric Boat in past years and thus should not continue to support these projects.

2. I do not mean to single out Electric Boat for criticism; however, I have not been asked routinely to comment on other IR&D programs, even from suppliers of the Naval Nuclear Propulsion Program. But the problem is with the Defense Department's IR&D program as a whole. Under this program, the Government may end up financing a substantial portion if not virtually all of a contractor's independent research and development work. Yet, the military services have no authority to direct the work and get no rights to any resultant products, technology or patents.

3. In my view, the granting of large sums of money for defense contractors to spend as they see fit and without close Government supervision is neither an economical nor desirable way to accomplish defense-related research and development work. The Defense Department, which is already critically short of research and development funds cannot afford to spend $700 million each year on contractor research and development programs when it is unable to control the work, account for the results, or control the costs. The Navy should not have to defer its own vital research and development programs for lack of funds while hundreds of millions of dollars are spent each year on contractor independent research programs which are of dubious value to the Defense Department.

4. Under the current procedures, the Defense Department must review IR&D proposals from those contractors who receive more than $2 million of IR&D payments from the Defense Department, and then make an affirmative determination that the work is of potential military benefit before IR&D

costs can be accepted. From what I have been able to determine, the Navy and the other military services tend to take a lenient approach to these reviews. Because the Defense Department is involved in a wide variety of activities, innovations in nearly any field of endeavor can be viewed as relating to defense work. The more pertinent question is whether the contractor's proposed program is of sufficient potential benefit to warrant funding in preference to direct Defense Department research and development programs that are being deferred for lack of funds.

5. I know of your interest in getting the most return for each defense dollar. The IR&D program is one area where I believe expenditures can be reduced substantially, or even eliminated, with no significant deterioration in our defense posture. Accordingly, I recommend that you insure that all organizations such as mine having cognizance over contractors doing Navy work be given the opportunity to comment in advance on all such contractors' IR&D proposals. I also recommend that you instruct those who review contractor IR&D proposals for the Naval Material Command to reject contractor IR&D programs except in those cases where the benefit to the Navy is deemed sufficient to warrant the cost. In such cases, I recommend the Navy make arrangements to finance the work by direct contract, rather than through IR&D, so that the Government could exercise supervision of the work and retain appropriate rights to resulting technical data, inventions and patents.

6. I would appreciate being informed of what action you take with regard to the above.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Installations and Logistics)
Assistant Secretary of the Navy
(Research and Development)
Chief of Naval Research
Commander, Naval Ship Systems Command

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

SEP 9 1974

Mr. Arthur Schoenhaut
Executive Secretary
Cost Accounting Standards Board
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Schoenhaut:

This letter comments on the proposed Cost Accounting Standard for Depreciation of Tangible Capital Assets.

As you are aware, I discussed my views on this important matter, at the Board's request, in a meeting with the Board on October 31, 1973. I am pleased to see that some of my views are reflected in the proposed standard. In particular, I believe the following provisions represent progress:

a. Recognition in the notice promulgating the proposed standard that contractors often base cost accounting on what is permitted by income tax regulations and that such treatment often is not equitable.

b. The requirement of the proposed standard that estimated service lives for tangible capital assets "shall be their expected actual periods of usefulness."

c. The requirement of the proposed standard that the method of depreciation selected "approximate the expected consumption of the asset."

I am concerned, however, that the methods you have selected for implementing these requirements may not be effective.

With regard to selection of estimated service life, the proposed standard requires that service life be no shorter than the "asset guideline" lives established by Internal Revenue Procedure 71-25 unless the contractor can support shorter lives by records of retirement or replacement experience. As I noted in my discussion with the Board on October 31, 1973, the Internal Revenue Service (IRS) guideline lives generally underestimate the lives of assets. Although the proposed standard establishes these lives as the minimum, I believe it is likely that contractors will attempt to use these guidelines wherever possible since they will usually be more favorable than actual expected lifetimes.

Because of a general lack of data on the actual lifetimes of assets, use of the Internal Revenue Service guidelines may be necessary as an interim measure to avoid delaying issuance of a depreciation standard. However, I recommend that the Board establish its own asset guideline periods based on actual service lives of assets which will be more appropriate for contract costing purposes than the Internal Revenue Service guideline periods. I understand that the Office of Industrial Economics of the Internal Revenue Service is accumulating actual data on asset retirement showing the amount, type and age of assets retired. This information should be of value to the Board in devising its own guidelines for service lives.

The second area in which I am concerned about the effectiveness of the proposed standard is in the determination of the method of depreciation. The proposed standard essentially requires that the same method be used for cost accounting as is used for financial accounting except where the financial accounting method "does not reflect the expected consumption of services" for the asset. Some criteria for measuring asset consumption are provided in the proposed standard; however, it is not clear who will bear the burden of proof if there is disagreement on methods of depreciation. I have stated before that, in my experience, there rarely is justification for accelerated depreciation in terms of the actual consumption of assets. I believe that the proposed standard will result in the burden of proof shifting to the Government whenever a contractor wants to use a method of depreciation with which Government auditors cannot agree. I recommend that the proposed standard be revised to require the straight line method of depreciation unless the contractor can explicitly justify and demonstrate that the characteristics of the asset are such as to make accelerated depreciation reasonable.

I hope these comments will be helpful to you. I recognize that this is a difficult subject for which to develop a standard and that much work has gone into the proposed standard. However, if this standard results in more reasonable cost allocations on Government contracts, as I expect it will, the work will have proved very worthwnile.

Sincerely,

H. G. Rickover

NRD:HGR H# 7951

H.G. Rickover, Director
Division of Naval Reactors

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 1 1974

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, D. C. 20548

Dear Mr. Staats:

In a letter dated September 27, 1974, Mr. R. W. Gutmann of your staff requested my comments on alternative approaches to the treatment by the Defense Department of contractor independent research and development costs (IR&D). The fourteen alternative approaches ranged from removal of all Defense Department controls over IR&D, to strict control of these costs through grants or contracts. I am responding directly to you because I believe IR&D is an important subject meriting your personal attention.

First, I want to comment on some of the underlying assumptions about IR&D and defense procurement that these approaches appear to make and with which I disagree. For example, there seems to be an assumption that without IR&D, weapons development will be adversely affected. Certainly, some technological developments in weaponry may have flowed from work funded under IR&D. But since World War II, the great majority of weapons technology has flowed from Government-directed defense work. During this period, most defense research and development has been funded directly by the Government through in-house laboratories and through contracts and grants to private industry and educational institutions. In over 50 years of naval experience, I have not found direct funding of research and development to be stifling to technological or scientific creativity. Thus, a change in the treatment of IR&D, in my opinion, would not hamper the development of weapons technology.

There also appears to be an inherent assumption that the Government has an obligation to subsidize contractors' independent research and development programs. For example, one disadvantage listed for a direct grant system of funding IR&D is that "contractors could be reluctant to use their own funds for research if they are not sure of getting grant funds for further work." (underlining mine). The question inevitably arises that if the research is not sufficiently attractive to be funded either by the contractor, or directly by the Government, why should the Government pay for it indirectly?

Much of the debate over IR&D within the defense community is being conducted with a basic misconception about defense procurement. There is a continuous search for the correct management formula or the ideal organizational structure under which defense procurement dollars automatically will be well

spent without having to resort to Government surveillance. Unfortunately, my experience has been that research and development and procurement do not lend themselves to simple, automatic policies. I find, for example, when dealing in these areas that research is not easily differentiated from development; some work can legitimately be classified in either category. Proper administration of research and development comes not from more precise definitions of these terms, but from better knowledge and closer technical control of the projects being undertaken.

Independent research and development and bid and proposal costs (B&P) are often interchangeable. Companies may treat certain costs as either IR&D or B&P for accounting purposes. This principle is even recognized in the Armed Services Procurement Regulation which permits companies to recover costs for B&P over the negotiated ceiling as long as the ceiling on IR&D costs is reduced by a like amount, and vice versa.

There is essentially no competition in most defense procurement. The only truly competitive procurements are formally advertised procurements, and they represent typically about eleven percent of prime contract dollars per year. On the other hand, over half of all defense procurement is placed under sole source or follow-on, non-competitive conditions. In this atmosphere, there is little real incentive for defense contractors to cut costs, and to manage closely such overhead programs as IR&D. On the contrary, current Defense Department profit policies reward high costs with high profits, and provide a positive incentive for inefficiency and lax management.

Finally, fixed price type contracts do not ensure low prices; nor do they protect the Government's interests sufficiently to make Defense Department controls over IR&D unnecessary. Fixed price contracts and subcontracts awarded under non-competitive conditions do limit to some extent the Government's exposure to cost overruns. But they give a contractor little incentive to submit the lowest reasonable bid price. Thus, fixed priced contracts are not a substitute for effective competition. In fact, as I am sure you are aware, there is no magical mix of contract types that can substitute for real competition or, in the absence of such competition, for Government surveillance of contractor operations.

What disturbs me the most is that the GAO proposals, like much of the current debate, tend to consider IR&D only from the contractors' point of view. Little if any attention is being given to IR&D as it affects the user--the Defense Department. Yet, these are important considerations, particularly in a period of budget stringency. For example:

The Navy is short of critically needed research and development funds. In fiscal year 1973, the last year for which figures are available, the Defense Department paid $441 million for contractor independent research and development work. In contrast, the total Navy exploratory development budget for fiscal year 1975 is under $300 million. Many important submarine research projects have had to be canceled, deferred, or cut back in such areas as advanced sonars, communications, weapons, navigation, and nuclear propulsion due to a lack of money. Yet contractors are able to pursue their own research and development projects because of the Defense Department's largesse with funds.

While hundreds of millions of defense dollars each year are spent for IR&D, the benefits accruing to the military from this work are uncertain. In my opinion, whatever benefits have accrued from this program in past years have not been worth the cost. Certainly this is true in the areas in which I have direct knowledge.

The Government has little control over IR&D programs. The Defense Department cannot actively supervise or even closely monitor the work; it cannot eliminate unnecessary duplication; and it cannot direct that certain projects be undertaken or performed.

The Government receives neither rights to technical data nor patent rights from work performed under IR&D. On the contrary, if a product or process developed under IR&D is patented by the contractor, the Government may have to pay a royalty for use of the patented item. I encountered one case where a contractor developed an automatic welding machine under an IR&D program, for which 99 percent of the costs were paid by the Defense Department. The welding machine was then marketed to defense suppliers who passed on the royalty costs to the Government in the price of their work In this case, the Government paid for developing the invention and continues to have to pay for the rights to use it.

In addition to these drawbacks to IR&D from the Government's point of view, the present IR&D system is actually anti-competitive. Companies doing defense business are able to develop inventions at Government expense which they may then use in their commercial work. This gives them a competitive advantage over non-defense firms which are not eligible for such a subsidy.

The present system of evaluating contractor independent research and development programs is ineffective. The law requires that the Defense Department make an affirmative determination that the work has a potential military relationship before IR&D costs can be accepted. But under these criteria, almost any research project, no matter how remote, could be shown to have a potential military relationship.

Finally, the reviews of contractor IR&D programs tend to be superficial. IR&D programs, for which the Government pays less than $2 million, are not reviewed technically; they are controlled only by a negotiated ceiling. Programs over $2 million receive technical reviews, but these are often conducted by people with little knowledge of the work. Even in the nuclear propulsion field, I am not routinely asked to evaluate contractor research programs, and as a consequence the Defense Department has funded IR&D projects which duplicated work I was doing, or which were directed toward commercial, not military application.

I believe that we need to recognize the Government's interests and abolish the practice of subsidizing contractor IR&D. I recommend that a system similar to that employed by the Atomic Energy Commission be adopted. Specifically:

1. Treat IR&D costs on a contract by contract basis. IR&D costs would be unallowable except where the contracting agency made an affirmative determination that an IR&D project provided sufficient benefits to the contract to warrant the cost.

2. Allow contractors to submit to the Defense Department any military-related research projects which they want the Government to finance completely. The Defense Department would then contract directly for whichever of these projects it desires to pursue. The funds would be provided as a separate line item in the RDT&E appropriation.

3. Allow B&P costs if the subject matter of the bids and proposals is applicable to defense work. B&P costs for non-defense work would be unallowable. Place a ceiling on the allowable B&P expenses such as one percent of the total direct material and direct labor costs of the contract work.

4. Reserve and protect Government rights to technical data and patents commensurate with the percentage of the research costs borne by the Government, regardless of whether funding of those costs is direct or indirect.

Contractors would undoubtedly dislike this system as it would greatly reduce the Government's funding of their own pet projects. But the question for the Congress must boil down to this: If the ordinary citizen were given up to 500 million dollars a year for research and development work, would he turn that money over to defense contractors to spend as they saw fit in the hope something useful would result? Or would he direct that money toward finding solutions to specific problems standing in the way of better weapons systems? There is no question in my mind but that the Department of Defense would get far more for its money if it were spent on specific defense projects

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where responsible officials had to review, approve, justify and defend the expenditures. This system would also permit Congress to review and oversee these expenditures--a possibility which is currently precluded.

I know you take seriously your responsibility to look "to greater economy or efficiency in public expenditures." In my view, the present IR&D system does not provide either economy or efficiency. That is why I recommend greater control over research and development work accomplished with public funds.

I appreciate the opportunity to comment to you on this subject.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON D.C. 20362

IN REPLY REFER TO
08

7 NOV 1974

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE NAVY (RESEARCH AND DEVELOPMENT)

Subj: Contractor Independent Research and Development

Ref: (a) My memorandum for the Chief of Naval Material, Ser 08H-2079 dtd 21 November 1973

Encl: (1) My letter to Comptroller General of the United States dtd 1 November 1974

1. On 21 November 1973, I sent you a copy of reference (a) regarding the Defense Department's Independent Research and Development policies. I noted that while the Government may finance a substantial portion if not virtually all of a contractor's IR&D work, the military services have no authority to direct the work and receive no rights to any resultant products, technology, or patents.

2. Enclosure (1) is a copy of a recent letter I sent to the Comptroller General of the United States in response to a General Accounting Office request for my views on the subject of contractor IR&D. In that letter, I pointed out that much of the debate over IR&D seems to be conducted from the contractor's point of view, with little attention being given to IR&D as it affects the Defense Department. I recommended that a system be adopted that recognizes the Government's interests and that abolishes the current practice of financing contractor-sponsored research with Defense Department funds.

3. A number of important submarine-related research and development projects have been cut back, canceled or deferred in the past year due to a lack of funds. This kind of budget stringency is particularly difficult to accept when contractors are able to pursue--at Government expense--their own research and development projects. Therefore, I recommend that you, as the senior Navy official responsible for research and development, work to change the Defense Department's policies on IR&D to stop this unnecessary expenditure of scarce public funds. I refer you to enclosure (1) for my specific recommendations.

4. I would appreciate being informed of what action you take in this matter.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Installations and Logistics)
Chief of Naval Material
Commander, Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
08H-1801
2 January 1975

MEMORANDUM FOR THE DEPUTY DIRECTOR, NAVY AND MARINE CORPS ACQUISITION REVIEW COMMITTEE

Subj: Draft Report of NMARC dtd 12/14/74; comments on

1. The purpose of this memorandum is to provide my comments on the December 14, 1974, draft report of the Navy and Marine Corps Acquisition Review Committee (NMARC) entitled "Draft (a); II Integrated Report".

2. The main thrust of the NMARC report, as I understand it, is as follows:

a. There are excessive layers of review and reports, within the Navy, and between the Navy and the Office of the Secretary of Defense (OSD), in both the technical and financial areas of program management.

b. A clearer distinction of functions needs to be made between the Office of the Chief of Naval Operations (OPNAV), the user, and the Naval Material Command (NAVMAT), the producer.

c. Program Management needs to be strengthened. Project managers should be experienced and should serve longer tours of duty (four years); they should be given the authority to do their job.

d. The Navy should increase the attractiveness of doing defense business through a number of financial and contractual means designed to decrease contractor risk and increase contractor profit.

3. With the exception of the last point, I agree with the thrust of these points in the NMARC report and have testified before Congress along these same lines. In particular, the number of administrative levels in the OSD and the Navy which now review every action in defense systems acquisition must be reduced. Yet the trend is in the opposite direction. For example, the Assistant Secretaries of Defense (Comptroller and Program Analysis and Evaluation) are becoming progressively more involved in the details of cost collection and cost estimating of weapon systems. The Office of the Assistant Secretary of Defense (Installations and Logistics) also is attempting to interject itself more completely in the Services' acquisition programs and business operations as evidenced by the proposed new charter (see proposed DoD Directive 5126.22)

that office recently circulated for comment. Similarly, the proliferation of staff organizations within the Navy, at the OPNAV and NAVMAT levels, adds to the layering and makes it increasingly difficult for the Navy's Systems Commands to perform their primary functions. In my view, the Navy should not undertake any reorganization that does not provide for specific absolute decreases in the number of levels of staff review and reporting for weapons systems acquisition programs. As a first step to do away with unnecessary layering, I recommend that the Naval Material Command be abolished, and that we return to the bilinear system in the Navy.

4. Despite the NMARC expression of concern over excessive layering, some of the NMARC recommendations would result in increased layering. For example:

a. NMARC recommended that the Navy Systems Acquisition Review Council (DNSARC) be expanded and play a greater role in reviewing major weapon acquisition program decisions. NMARC took the view that this step would ultimately lead to fewer staff reviews by the Office of the Secretary of Defense prior to meetings of the Defense Systems Acquisition Review Council (DSARC). But the DSARC process itself has resulted in increased involvement of OSD staff personnel in the details of weapon acquisition programs. The establishment of an expanded and active DNSARC will further aggravate a project manager's problems by involving still more Navy staff groups in the details of his program.

b. NMARC recommends giving the Chief of Naval Material an "important role" in preparing and reviewing business strategy. Business strategy depends on the product and the industry involved. Elevating these decisions to the Chief of Naval Material level increases the amount of NAVMAT staff review of matters that are properly the responsibility of the Systems Commands.

c. NMARC notes that cost estimating organizations are understaffed, but recommends that the Navy establish an additional cost estimating group (another layer) to prepare independent cost estimates, and to review the work of the other estimators. Establishing new cost estimating groups at higher levels with their own unique requirements for information and reports, and away from where the work is actually done, must inevitably be counter-productive and inefficient.

d. NMARC recommends designation of a flag officer in NAVMAT as Test Facilities Manager. This would add another unnecessary

layer of management in the area of test and evaluation, a function the Systems Commands are already responsible for carrying out.

5. With regard to the need to strengthen program management:

a. NMARC recommends four year tours for program managers and their superiors "if possible", to avoid excessive learning and approval delays. I agree, but see no reason to limit to four years the tenure of key program personnel. They should serve for the life of the project, otherwise they have no responsibility for the decisions they make.

b. NMARC recommends that attendance at one or more formal Acquisition Management Schools be made mandatory for project managers. Acquisition Management Schools are no substitute for project experience. In my opinion, no management course can substitute for time in the job and Navy personnel assignments should be based on this premise.

c. NMARC recommends that the Navy apply Design-to-Cost principles early in the design of new weapon systems. Obviously, cost considerations must be weighed in the design of weapons systems. However, there has been a tendency in the Department of Defense to catch hold of slogans such as "Design to Cost", "Fly Before You Buy", "Total Package Procurement", "Management By Objectives", and so on as a solution to problems. Too often in the past such programs and slogans have actually diverted attention away from proper planning and technical details.

6. NMARC makes several recommendations for increasing the attractiveness of doing defense business. These recommendations reflect the standard contractor viewpoint--profits should be higher, progress payments should be more liberal, imputed interest should be an allowable cost, Government audits should be reduced. In addition, NMARC concludes that the major reasons for claims were the Government's failure to use the appropriate type of contract, and the untimely resolution of changes by both the contractor and the Government. With these conclusions, NMARC appears to have accepted the notion that if a fixed price incentive contract results in low profits to the contractor, then the Government is at fault for choosing the wrong type of contract. The report neglects to mention contractor mismanagement, production inefficiencies, and loafing as causes of the overruns which breed claims.

If implemented, NMARC's recommendations would, most likely, make defense business more attractive to contractors. But

should it be the Government's objective to see to it that the contractor makes a profit regardless of his performance? Some believe so. While they espouse the advantages of the free enterprise system, they would privatize their gains and have the Government nationalize their losses. However, we in the Navy cannot follow this line, for we are obligated to represent the Government's interests and to spend the taxpayers' money as if it were our own.

Despite the clamor some contractors have been making about low profits, NMARC should not forget that contracts are bilateral instruments resulting from free-will negotiations; they represent what both parties agreed was a reasonable business proposition. If some contracts do not turn out to be as profitable as contractors originally hoped, it is incorrect to merely assume that this resulted from inadequate negotiated profits, inappropriate progress payments, the wrong type of contract, or the unallowability of imputed interest.

7. Due to the short time made available to respond, the above represents my comments on only some of the major aspects of the NMARC draft report. My views on the subjects covered by the NMARC draft report are covered in more detail in testimony before the Senate Armed Services Committee on December 9, 1971, and the House Armed Services Committee, Seapower Subcommittee on September 23, 1974.

H. G. Rickover

CC:
COMNAVSEA

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D. C. 20360

IN REPLY REFER TO

13 MAR 1975

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: CNM Project Reporting System and Status Board

Ref: (a) Draft NAVMAT Notice 5200
(b) NAVMAT memo 09/RLB dtd 5 Feb 1975

1. By reference (a), the Naval Material Command has provided interim procedures, guidance and direction for implementation of the Chief of Naval Material Procurement and Development Project Status Reporting System. The intent of this new reporting system is the establishment of a project status display board from which NAVMAT procurement and development projects may be monitored for status of schedule, technical, financial, and resource condition. Reference (b) initiates the Pilot Phase of this reporting system and solicits suggestions for improvements on the basis of experience from all involved parties. The purpose of this memorandum is to recommend that you not implement this new reporting system.

2. There already exists a plethora of reports and submissions which provide essentially the same information required under this new system. Among these information sources are DCP's (Development Concept Paper), APP's (Advanced Procurement Plan), SAP's (Ship Acquisition Plan), SAR's (Selected Acquisition Report), SCA's (Ship Cost Adjustment Report), PEDS' (Program Element Descriptive Summary), mini-MIPS (Master Information Paper), DD-1634's (Research and Development Planning Summary), Fact Sheets, Issue/Problem Sheets, CNM Program Summary Sheets, Ship Data Sheets, RMS (Resource Management System) reports, PARS (Procurement Accounting and Reporting Systems) reports, budget exhibits such as P-8's/P-1's and RD-A's/RD-B's, Funding Plan Profiles, etc.

3. I see no advantage to requiring additional project status reports; in fact, significant benefits would be derived from consolidation of existing ones. It seems that the current practice is for each command (and frequently offices within a command) to require separate reports; in many instances these include the same information arranged in slightly different format. As each office adds its own requirements and establishes its own forms, program managers are faced with an additional reporting requirement in a system that is already burdened with an excessive layering of review and reports. This system must inevitably be counter-productive and inefficient.

4. The Navy is today faced with difficult and complex problems such as sharply rising costs, production inefficiencies, late delivery of ships, shipbuilder claims and the like. The proliferation of reports diverts attention from the real task of program management, making it increasingly difficult for the Navy's Systems Commands to perform their primary functions. The time and effort required to complete such reports could be better spent in tackling the important issues confronting us.

5. For these reasons, I strongly urge that this new Project Reporting System and Ststus Board not be established. In the event that you do decide to implement this new Reporting System, I urge that nuclear propulsion matters be exempt from its requirements.

H. G. Rickover
Deputy Commander for
Nuclear Propulsion

cc:
Commander, Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

23 May 1975

MEMORANDUM FOR THE DEPUTY SECRETARY OF DEFENSE

Subj: Implementation of Cost Accounting Standard 409, Depreciation of Tangible Capital Assets

1. During our discussion on the morning of May 20th, you expressed your position that the cost accounting standard on depreciation (CAS 409) should be delayed for one year to give the Department of Defense time to study profit policies in relation to the depreciation standard. I stated that it is my understanding that the standard would not affect capital asset service lives for about two years and that any impact on contract pricing as a result of the requirement to use realistic service lives would be minor for several years thereafter. Thus, in my opinion, there is no need to defer the standard. You pointed out that the standard will be required in defense contracts placed after 1 July 1975 and therefore would create an immediate problem.

2. I have again looked into this matter. Based on discussions with the staff of the Cost Accounting Standards Board, the Board's explanatory data published in the Federal Register, and correspondence provided by your staff concerning the standard, my understanding is that the standard will be implemented as follows:

a. Although the effective date of the standard is 1 July 1975, contractors will have a minimum of two years thereafter in which to establish records and conduct analyses of historical asset lives on which to base their future estimates of service lives.

b. For assets acquired prior to completion of such analyses, contractors may use the same service lives that they use for financial accounting purposes.

3. Some defense contractors argue that the cost accounting standard on depreciation will discourage investment in plant and equipment needed for defense work. This is used as a reason for delaying implementation of the standard a year until the Department of Defense completes its profit review and makes whatever modifications are necessary to defense profit policies.

4. My experience has been that depreciation generally does not constitute a large percentage of a contract price. Data from the durable goods industry indicates that, on the average, depreciation accounts for about 3 percent of sales. As noted in paragraph 2 above, contractors will have at least two years and probably longer before they will be required to apply new service lives, and then the new service lives will apply only to subsequent acquisitions. Except in very unusual cases, such as the start-up of a new plant, the assets a contractor would acquire each year after the two year period would be only a fraction of his total assets. Similarly, to the extent there are differences between the depreciation cost of these new assets using new service lives and the depreciation cost using old service lives, such differences would not be large in relation to total depreciation costs, particularly in the early years. From a contractor's point of view the primary impact of using longer service lives is to reduce cash flow. Thus, the only added cost to the contractor of being required to use more realistic service lives, is the cost of financing a relatively small difference in depreciation costs on the affected assets.

5. Based on the above, it appears to me that, even in the case of long term contracts awarded prior to completion of the Department of Defense profit study, the impact of the standard will be negligible. In any event, it will be sufficiently measurable to allow adequate consideration during negotiation of any contract where special circumstances may prevail. Thus it is my opinion that defense procurement officials should be able to demonstrate to contractors that the depreciation standard should not affect their decision to invest in new facilities, even in the case of long term contracts awarded during the next year.

H. G. Rickover

Copy to:
Under Secretary of the Navy

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

27 June 1975

MEMORANDUM FOR COMMANDER, NAVAL SEA SYSTEMS COMMAND

Subj: Contractor independent research and development

Ref: (a) General Accounting Office Report on Contractors' Independent Research and Development Program--Issues and Alternatives

Encl: (1) My ltr dtd Nov. 1, 1974 to the Comptroller General of the United States

1. On 16 June 1975, I received a copy of reference (a) with a request to submit comments on the findings, conclusions and recommendations in the General Accounting Office report.

2. The GAO report was written in response to questions raised by Senators McIntyre and Proxmire relating to the Government's support of contractors' independent research and development (IR&D) programs. The GAO concludes that Congress needs to clarify the policy for support of IR&D. GAO also studied several alternatives to the present treatment of IR&D by the Government. In essence, the GAO report recommends continuing the present Defense Department system for funding contractor independent research and development. GAO also recommends uniform treatment of IR&D among all Government agencies and use of the Defense Department's policies and procedures for implementing the law.

3. In enclosure (1), I outlined to the Comptroller General why, in my opinion, the Defense Department's policies and procedures on IR&D were unsatisfactory. Specifically:

a. While hundreds of millions of defense dollars each year are spent for IR&D, the benefits accruing to the military for this work are questionable. In my opinion, past benefits have not been worth the costs.

b. The Government has little control over IR&D programs. The Defense Department cannot actively supervise or even closely monitor the work; it cannot eliminate unnecessary duplication; and it cannot direct that certain projects be undertaken or performed.

c. The Government receives neither rights to technical data nor patent rights from work performed under IR&D.

d. The present system of evaluating contractor IR&D programs is ineffective. Almost any research project can be shown to meet the law's relevancy requirement that the work have a potential military relationship before IR&D costs can be accepted.

e. Reviews of contractor IR&D programs, where performed, tend to be superficial, and are often conducted by people with little knowledge of the work.

4. The Navy is short of critically needed research and development funds. The total Navy exploratory development budget for fiscal year 1975 is under $300 million. In contrast, the Defense Department spent over $450 million for contractor IR&D in fiscal year 1974. As you know, many research projects in all areas of submarine technology are being deferred, cut back, or canceled due to a lack of money. Yet contractors are able to pursue their own research and development projects because of the Defense Department's generous policy toward funding IR&D.

5. GAO noted that an executive branch interagency commission has recommended adoption of the Armed Services Procurement Regulation policies and procedures for IR&D as a standard for the executive branch. The commission would also broaden the relevancy requirement to encompass relevancy to a Government-wide interest. If adopted, this broadened policy would eliminate for all practical purposes even the small amount of control over IR&D that presently exists. I believe NAVSEA should go on record opposing this change. Therefore, I recommend that NAVSEA take the following position:

a. IR&D is not a necessary cost of doing business, and should not be financed by the Defense Department without close controls.

b. Present Defense Department policies and procedures on IR&D are inadequate and should be revised.

c. The Defense Department should treat IR&D on a contract-by-contract basis, and should reserve and protect Government rights to technical data and patents commensurate with the percentage of the research costs borne by the Government.

d. The interagency commission's proposal to broaden the relevancy requirement for IR&D should be reversed.

6. I would appreciate being informed of what action you take in this matter.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Installations and Logistics)
Assistant Secretary of the Navy
(Research and Development)
Chief of Naval Material

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 1 1974

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, D. C. 20548

Dear Mr. Staats:

In a letter dated September 27, 1974, Mr. R. W. Gutmann of your staff requested my comments on alternative approaches to the treatment by the Defense Department of contractor independent research and development costs (IR&D). The fourteen alternative approaches ranged from removal of all Defense Department controls over IR&D, to strict control of these costs through grants or contracts. I am responding directly to you because I believe IR&D is an important subject meriting your personal attention.

First, I want to comment on some of the underlying assumptions about IR&D and defense procurement that these approaches appear to make and with which I disagree. For example, there seems to be an assumption that without IR&D, weapons development will be adversely affected. Certainly, some technological developments in weaponry may have flowed from work funded under IR&D. But since World War II, the great majority of weapons technology has flowed from Government-directed defense work. During this period, most defense research and development has been funded directly by the Government through in-house laboratories and through contracts and grants to private industry and educational institutions. In over 50 years of naval experience, I have not found direct funding of research and development to be stifling to technological or scientific creativity. Thus, a change in the treatment of IR&D, in my opinion, would not hamper the development of weapons technology.

There also appears to be an inherent assumption that the Government has an obligation to subsidize contractors' independent research and development programs. For example, one disadvantage listed for a direct grant system of funding IR&D is that "contractors could be reluctant to use their own funds for research if they are not sure of getting grant funds for further work." (underlining mine). The question inevitably arises that if the research is not sufficiently attractive to be funded either by the contractor, or directly by the Government, why should the Government pay for it indirectly?

Much of the debate over IR&D within the defense community is being conducted with a basic misconception about defense procurement. There is a continuous search for the correct management formula or the ideal organizational structure under which defense procurement dollars automatically will be well

spent without having to resort to Government surveillance. Unfortunately, my experience has been that research and development and procurement do not lend themselves to simple, automatic policies. I find, for example, when dealing in these areas that research is not easily differentiated from development; some work can legitimately be classified in either category. Proper administration of research and development comes not from more precise definitions of these terms, but from better knowledge and closer technical control of the projects being undertaken.

Independent research and development and bid and proposal costs (B&P) are often interchangeable. Companies may treat certain costs as either IR&D or B&P for accounting purposes. This principle is even recognized in the Armed Services Procurement Regulation which permits companies to recover costs for B&P over the negotiated ceiling as long as the ceiling on IR&D costs is reduced by a like amount, and vice versa.

There is essentially no competition in most defense procurement. The only truly competitive procurements are formally advertised procurements, and they represent typically about eleven percent of prime contract dollars per year. On the other hand, over half of all defense procurement is placed under sole source or follow-on, non-competitive conditions. In this atmosphere, there is little real incentive for defense contractors to cut costs, and to manage closely such overhead programs as IR&D. On the contrary, current Defense Department profit policies reward high costs with high profits, and provide a positive incentive for inefficiency and lax management.

Finally, fixed price type contracts do not ensure low prices; nor do they protect the Government's interests sufficiently to make Defense Department controls over IR&D unnecessary. Fixed price contracts and subcontracts awarded under non-competitive conditions do limit to some extent the Government's exposure to cost overruns. But they give a contractor little incentive to submit the lowest reasonable bid price. Thus, fixed priced contracts are not a substitute for effective competition. In fact, as I am sure you are aware, there is no magical mix of contract types that can substitute for real competition or, in the absence of such competition, for Government surveillance of contractor operations.

What disturbs me the most is that the GAO proposals, like much of the current debate, tend to consider IR&D only from the contractors' point of view. Little if any attention is being given to IR&D as it affects the user--the Defense Department. Yet, these are important considerations, particularly in a period of budget stringency. For example:

The Navy is short of critically needed research and development funds. In fiscal year 1973, the last year for which figures are available, the Defense Department paid $441 million for contractor independent research and development work. In contrast, the total Navy exploratory development budget for fiscal year 1975 is under $300 million. Many important submarine research projects have had to be canceled, deferred, or cut back in such areas as advanced sonars, communications, weapons, navigation, and nuclear propulsion due to a lack of money. Yet contractors are able to pursue their own research and development projects because of the Defense Department's largesse with funds.

While hundreds of millions of defense dollars each year are spent for IR&D, the benefits accruing to the military from this work are uncertain. In my opinion, whatever benefits have accrued from this program in past years have not been worth the cost. Certainly this is true in the areas in which I have direct knowledge.

The Government has little control over IR&D programs. The Defense Department cannot actively supervise or even closely monitor the work; it cannot eliminate unnecessary duplication; and it cannot direct that certain projects be undertaken or performed.

The Government receives neither rights to technical data nor patent rights from work performed under IR&D. On the contrary, if a product or process developed under IR&D is patented by the contractor, the Government may have to pay a royalty for use of the patented item. I encountered one case where a contractor developed an automatic welding machine under an IR&D program, for which 99 percent of the costs were paid by the Defense Department. The welding machine was then marketed to defense suppliers who passed on the royalty costs to the Government in the price of their work In this case, the Government paid for developing the invention and continues to have to pay for the rights to use it.

In addition to these drawbacks to IR&D from the Government's point of view, the present IR&D system is actually anti-competitive. Companies doing defense business are able to develop inventions at Government expense which they may then use in their commercial work. This gives them a competitive advantage over non-defense firms which are not eligible for such a subsidy.

The present system of evaluating contractor independent research and development programs is ineffective. The law requires that the Defense Department make an affirmative determination that the work has a potential military relationship before IR&D costs can be accepted. But under these criteria, almost any research project, no matter how remote, could be shown to have a potential military relationship.

Finally, the reviews of contractor IR&D programs tend to be superficial. IR&D programs, for which the Government pays less than $2 million, are not reviewed technically; they are controlled only by a negotiated ceiling. Programs over $2 million receive technical reviews, but these are often conducted by people with little knowledge of the work. Even in the nuclear propulsion field, I am not routinely asked to evaluate contractor research programs, and as a consequence the Defense Department has funded IR&D projects which duplicated work I was doing, or which were directed toward commercial, not military application.

I believe that we need to recognize the Government's interests and abolish the practice of subsidizing contractor IR&D. I recommend that a system similar to that employed by the Atomic Energy Commission be adopted. Specifically:

1. Treat IR&D costs on a contract by contract basis. IR&D costs would be unallowable except where the contracting agency made an affirmative determination that an IR&D project provided sufficient benefits to the contract to warrant the cost.

2. Allow contractors to submit to the Defense Department any military-related research projects which they want the Government to finance completely. The Defense Department would then contract directly for whichever of these projects it desires to pursue. The funds would be provided as a separate line item in the RDT&E appropriation.

3. Allow B&P costs if the subject matter of the bids and proposals is applicable to defense work. B&P costs for non-defense work would be unallowable. Place a ceiling on the allowable B&P expenses such as one percent of the total direct material and direct labor costs of the contract work.

4. Reserve and protect Government rights to technical data and patents commensurate with the percentage of the research costs borne by the Government, regardless of whether funding of those costs is direct or indirect.

Contractors would undoubtedly dislike this system as it would greatly reduce the Government's funding of their own pet projects. But the question for the Congress must boil down to this: If the ordinary citizen were given up to 500 million dollars a year for research and development work, would he turn that money over to defense contractors to spend as they saw fit in the hope something useful would result? Or would he direct that money toward finding solutions to specific problems standing in the way of better weapons systems? There is no question in my mind but that the Department of Defense would get far more for its money if it were spent on specific defense projects

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where responsible officials had to review, approve, justify and defend the expenditures. This system would also permit Congress to review and oversee these expenditures--a possibility which is currently precluded.

I know you take seriously your responsibility to look "to greater economy or efficiency in public expenditures." In my view, the present IR&D system does not provide either economy or efficiency. That is why I recommend greater control over research and development work accomplished with public funds.

I appreciate the opportunity to comment to you on this subject.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

5 DEC 1975

The Honorable Thomas J. McIntyre, Chairman
Subcommittee on Research and Development
Committee on Armed Services
United States Senate

The Honorable William Proxmire, Chairman
Subcommittee on Priorities and Economy in Government
Joint Economic Committee
Congress of the United States

Dear Senators McIntyre and Proxmire:

Upon completion of my September 29, 1975 testimony on Independent Research and Development (IR&D) and Bid and Proposal (B&P) costs, you invited the Tri-Association Ad Hoc Committee on IR&D/B&P to respond to my testimony for the record. You also invited me to comment on their response. Enclosure (1) contains my detailed comments on the Tri-Association response.

As you will remember, I testified that the present IR&D system is ill-founded and wasteful. The defense industry defends IR&D as a necessary cost of doing business; as an aid to competition; and as an essential contributor to our nation's technological progress. I testified that it is instead a subsidy to the defense industry, anti-competitive, and a form of unnecessary philanthropy in a time of limited funds for national defense. Moreover, the present IR&D system involves expenditure of public money without Congressional scrutiny, and without anyone in the executive branch being held accountable for the results.

The Tri-Association response has characterized my testimony as "subjective opinion, innuendo, and generalizations that are at considerable variance with the facts." It has attempted to rebut my arguments. However, the facts are as follows:

. Defense Department figures show that competition in defense procurement is the exception, not the rule. The Comptroller General has stated that there is less competition than the DOD acknowledges.

. The requirement that the Defense Department not pay for IR&D and B&P unless the work has a potential military relationship is ineffective. The GAO found that this requirement has had no effect on DOD's reimbursement of IR&D. Under present rules, even the development of home appliances has been accepted as having a potential military relationship.

. The reported cost of IR&D and B&P to the Defense Department equals 3.73% of defense sales. Scarce procurement dollars are thus being diverted from hardware to Independent Research and Development when the Navy, for example, cannot get enough money for well-defined research of its own.

. The present IR&D system is anti-competitive. First, the largest reimbursements for IR&D and B&P go to large and well-established defense firms to the detriment of smaller companies. Second, by being able to employ otherwise idle employees on make-work IR&D projects during periods of low workload, large defense oriented firms gain an advantage over smaller or more commercially oriented competitors since the Government picks up most or all of these IR&D costs. Third, large defense contractors with large government-subsidized IR&D programs can develop inventions and patents to help retain their technological advantage over smaller companies.

. Over 25 percent of all contractor divisions listed in the DOD's IR&D and B&P report do 90 percent or more of their business with the Defense Department. The Government pays all or nearly all of these firms' IR&D and B&P costs, yet it retains no rights to inventions, patents, or technical data; DOD, in fact, may have to pay a royalty to use inventions developed under IR&D programs.

The Tri-Association refers more than once to my position on IR&D as "unique," "narrow," "parochial," "isolated." Industry's view, on the other hand, is stated to be "substantially in agreement" with the views of various Government departments, offices, boards, and commissions. I recognize that various Government departments have supported the IR&D and B&P program. But this support undoubtedly would weaken if IR&D were not buried in other budget figures, and had to compete openly and directly with other R&D projects for the available funds. I also recognize that the Tri-Association has vested interests to protect. Congress, on the other hand, has the responsibility to conserve public funds and see that they are spent to best benefit the nation's defense. It was in this context that I gave my testimony.

I appreciate this opportunity to respond to the defense industry's comments on my testimony. I would appreciate it if you would include my response in the record of the hearings and wherever else your committees elect to publish the Tri-Association comments.

H. G. Rickover

Enclosure

COMMENTS ON TRI-ASSOCIATION RESPONSE TO ADMIRAL RICKOVER'S TESTIMONY ON INDEPENDENT RESEARCH AND DEVELOPMENT AND BID AND PROPOSAL COSTS

1. Competition in defense procurement

The Tri-Association response calls my statement that the vast majority of defense procurement is actually non-competitive "provocative and a fallacy." It supports its position with Defense Department figures on the extent of competition in defense procurement, and then proceeds to describe the pressures of competing for additional business placed on defense contractors.

My statement may be provocative to the defense industry, but it is not fallacious. Defense Department figures for Fiscal Year 1975 show that 61.6% of military procurement is sole source, and therefore non-competitive. Formally advertised procurement amounts to 8.5% of military procurement; even if formally advertised procurement under the small business set-aside program were included, the figure would be only 12.3%. Nearly all of the remaining military procurement--classed as competitive by the DOD--is placed either under so-called competitive negotiated contracts, or as a result of design or technical competition. These are not truly price competitive awards. In such procurements, shop loading, prior technical experience, and factors other than price often dictate which company will win the contract. The net result is that there is very little true competition in defense procurement, contrary to the impression given by the Defense Department's figures.

The GAO has also come to the same conclusion. In testimony before Congress a few years ago, Comptroller General Staats said "A large percentage of the actions which were classified and reported to higher management levels within the Department of Defense as competitive procurements in our opinion were in fact made without competition."

This is not to say that defense contractors do not vie with each other for defense work. But a defense contractor's ability in public relations and lobbying is often as important a factor in the competition as is his engineering and production capability. To win a contract, a contractor might even bid less than his expected costs, hoping to recover any loss through claims, changes, or subsequent sole-source procurements. This is not true price competition which promotes cost control and efficiency. Rather it is a sort of competition to determine which firm can get into a sole source position.

Enclosure (1)

The fact is that the amount of true competition in defense procurement is limited. It is not adequate to ensure that only reasonable costs are charged to Government contracts.

2. Defense Department administration of IR&D

The Tri-Association characterizes my testimony on the DOD's administration of the IR&D program as "subjective opinion, innuendo and generalizations that are at considerable variance with the facts." It contends that the Government does have influence over the type and amount of IR&D conducted, and cites technical ratings, negotiated ceilings, and the potential military relationship requirement as evidence of Government control.

The Tri-Association misses the point. Laws and regulations may exist to control the cost of IR&D and B&P to the Defense Department. But as implemented, these controls are largely cosmetic. Take the Armed Services Procurement Regulation (ASPR) provision on negotiated ceilings as an example. The Tri-Association points out that ASPR gives the contracting officer unilateral authority to set a ceiling on IR&D costs. In actual practice, this power is seldom used; it is almost impossible for the Government to establish unilaterally a ceiling substantially lower than that insisted on by a contractor. If the contractor insists that the proposed IR&D and B&P is necessary to the firm's future, and that it has a potential military relationship, the contracting officer has little basis for establishing a lower ceiling. In one case where a contracting officer has attempted unilaterally to set a ceiling, the contractor has challenged that determination in court.

The requirement that DOD not pay for IR&D projects unless they possess a potential military relationship (PMR) is also cosmetic. DOD's mission is so broad that almost all efforts of defense contractors can be shown to have potential military relationship. Moreover, as pointed out in my testimony, DOD has even accepted such projects as the development of home appliances as having a potential military relationship. The GAO found "that the PMR requirement has had no effect on DOD's reimbursement of contractor's costs."

3. Cost of IR&D

I had testified that, as a percentage of defense sales, IR&D and B&P costs to the Defense Department have risen from 2.73% in 1968 to 3.73% in 1974. The Tri-Association explains that accounting changes make the apparent increase in IR&D/B&P costs since 1968 greater than the actual increase. The Tri-Association is correct in this regard and the fact that the actual cost of IR&D and B&P has been understated in the past should be recognized by the Congress.

Moreover, reported figures are still understated because (i) they cover only 90 of the largest defense contractors, and (ii) they do not reflect their share of company general and administrative costs.

The question at hand, however, is why there should be a 3-3/4% IR&D and B&P "tax" on procurement--a tax that did not exist prior to 1960 when the IR&D and B&P program was introduced.

The Tri-Association believes I am "parochial" in comparing the amount of IR&D and B&P financed each year by the Defense Department with the number of important submarine research and development projects turned down by Congress because of a lack of funds. I recognize that if Congress reduces IR&D and B&P, equivalent funds will not flow to submarine research and development work unless Congress so decides. However, members of Congress should know that while up to a billion dollars a year is spent on IR&D and B&P of unknown military significance, money is unavailable for specific, well-defined military research and development. In my opinion we should not continue to fund independent research and development projects of dubious military merit at a time when we cannot afford to fund needed military research and development.

4. Impact on competition

The Tri-Association states that when I point out that the largest defense contractors generally receive the largest IR&D payments, thus enabling them to perpetuate their dominant position in the defense market, I am confusing cause and effect.

I am not saying that large IR&D programs cause companies to become large defense contractors. However, it is a fact that large and well-established defense firms receive the largest reimbursements for their IR&D and B&P costs. Contrast this with a small company desiring to enter defense work. The company must pay for bids and proposals and research work out of its own profits or with new capital, a constraint only partly shared by established defense firms. Moreover, small defense contractors are at a disadvantage because their small sales base cannot support the extensive research and development programs undertaken by their large competitors. The result is that large defense contractors have an advantage over all small firms which helps the large contractors to retain their dominant defense position.

The Tri-Association disputes an example I gave, arguing that the costs for studies of a large nuclear-powered submarine oil-tanker conducted under IR&D and B&P should be allowed on the grounds that the Navy would have benefited from lower overhead costs if the project had been successful. Unfortunately, the Armed Services Board of Contract Appeals has recently ruled that the contractor's costs of IR&D and

B&P incurred on this project are allowable and must therefore be reimbursed by the Navy. Despite extensive testimony by Navy witnesses that the work associated with the submarine tanker would not benefit the Navy's submarine program, the Board found benefit from this work. Among other points, the Board used the same reasoning put forward by the Tri-Association, i.e. that the Navy would have benefited from the lower overhead attendant with the future commercial work had the project been successful.

In my view the Board made a bad decision, but the Board's job is to apply the Defense Department's procurement rules whether or not they make sense or protect the Government. The argument that anything that will promote more business should be an allowable cost because it may result in future lower overhead costs is not sound. On that basis the DOD would have to pay advertising costs and entertainment expenses--which under ASPR are unallowable--because it could be argued that such expenditures would generate new commercial work. The Armed Services Procurement Regulation should be revised to preclude such reasoning in the future.

5. IR&D as a normal business expense

Defense contractors often argue that IR&D costs are normal business expenses as are rent, heat, light and maintenance. In my testimony, I stated this is not a valid comparison--that there is no incentive for contractors to waste light or heat, while there is an incentive for them to increase spending on IR&D and B&P. The Tri-Association finds my view "inconsistent;" that if there is little true competition, defense contractors would have no more incentive to control costs such as heat and light than they would to control IR&D and B&P costs.

The Tri-Association is correct in highlighting that in a non-competitive situation, a contractor may have little or no incentive to control costs. Nonetheless, large defense oriented firms have a positive incentive to use IR&D and B&P as a means for financing make-work projects to keep employees available for possible future work, and to strengthen their market position. The more they spend in this manner, the better their chances of winning new contracts, thereby enhancing their advantage over smaller, more commercially oriented companies.

6. Rights to inventions, patents and technical data

The Tri-Association states that it would "appear grossly inequitable" for the Government to seek rights to patents, inventions, and data merely on an assumption that the Government "may" have to pay a royalty to a contractor for these rights under the present system. It disputes my statement that

the Government may pay for most of the work by noting that "only a handful--probably less than ten" of the major companies doing defense work do more than 50% of their total business with the Defense Department. Finally, it attempts to justify why it is fair for companies to deny rights to their inventive employees, but not fair for the Government to do so with contractors.

The Tri-Association's statement on this issue is misleading. Well over half of the 236 contractor reporting divisions or operating groups listed in the Fiscal Year 1974 IR&D and B&P report of the Defense Contract Audit Agency do more than 50% of their business with the Defense Department. Over 60 of these divisions do 90% or more of their business with DOD. In such cases, the Government may end up paying virtually all of the costs of an IR&D project and still have no right to the resulting inventions or technical data.

The Tri-Association argues that individuals can cede their rights to inventions without losing their inventiveness, but companies cannot. In my opinion, that argument defies logic. The public should receive rights to inventions commensurate with the share of the costs financed with public funds. This was the method used by the Atomic Energy Commission, and advocated by the GAO.

7. Impact on National Defense

The Tri-Association states "Obviously, the Admiral desires that all R&D be government-directed." I do not advocate Government direction of all research and development. Companies and universities should be free to pursue without outside interference those areas of research which they themselves fund. But it does not mean that companies should be able to pursue research funded by the Defense Department without Defense Department control. To do so without specific Congressional authorization violates the basic principle of accountability of public funds.

The Tri-Association implies that continued Government support of IR&D is essential to national defense. Yet, it does not explain how, prior to 1960, defense contractors were able to fund their own research and development programs when the costs of such programs were generally unallowable.

The United States must maintain a high level of support for military research and development to meet the increased effort put forth by the Soviet Union. However, elimination of Defense Department support for IR&D would not be inconsistent with this goal. With our limited funds, it is more important to direct public money toward solving specific military problems, than to spend it in the hope that something of military value may eventually result.

8. Summary and Conclusions

The Tri-Association states that the Defense Department's share of contractor IR&D and B&P costs is down from 51% to 40% in the last five years. It concludes "this may result in disastrous consequences in the future" since low defense industry profits "preclude the possibility that reductions in defense IR&D/B&P allowances can be offset by increased expenditures of company funds."

These are the facts: First, no one knows how much IR&D and B&P really costs the Government because the reported figures are understated. Second, the figures that are reported show that DOD's share of contractor IR&D and B&P actually went from 57% in 1969 to 48% in 1974--not from 51% to 40%; the Tri-Association statistics refer solely to IR&D and do not include B&P. Third, the declining share of IR&D and B&P paid by the Defense Department results from a decline in defense spending in relation to commercial work, and not from any tightening of Defense rules. As explained earlier, IR&D and B&P accounts for a larger percentage of each procurement dollar spent by the Defense Department than it did seven years ago. Therefore, any implication that there has been a cutback in DOD support of IR&D and B&P is erroneous.

UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

January 20, 1976

R. Tenney Johnson
General Counsel

ERDA PATENT POLICY

Your memorandum dated December 30, 1975, invited my comments on ERDA's new patent policy. Attached is a copy of my 1961 testimony before the Senate Judiciary Committee on this subject. Nothing I have observed in the past 15 years has changed my view that patents developed at Government expense should belong to the Government.

In the field of nuclear energy, the Atomic Energy Act requires that the Government take title to inventions made or conceived in the course of or under any contract, subcontract, or arrangement entered into with or for the benefit of the Commission (now ERDA). Although the Act provides authority to waive these rights when deemed appropriate, the Atomic Energy Commission granted few waivers.

In the non-nuclear field, the Federal Non-Nuclear Energy Research and Development Act of 1974 similarly directs the Government to take title to inventions made or conceived in the course of or under any ERDA contract. The Federal Non-Nuclear Energy Act also provides waiver authority and specifies certain considerations that should be taken into account in determining whether a waiver should be granted. However, the Joint Conference Report on the Federal Non-Nuclear Energy Act indicates that a relaxation of waiver rules is not contemplated.

Specifically, the Conference Report states:

> "Government patent policy carried out under the NASA and AEC Acts and regulations, and the Presidential Patent Policy Statement with respect to energy technology, has resulted in relatively few waivers or exclusive licenses in comparison with the number of inventions involved. The conference committee expects that similar results will obtain under section 9."

The Federal Non-Nuclear Energy Act did not revise the patent requirements of the Atomic Energy Act.

As a result of the Non-Nuclear Energy Act, ERDA issued new Patent Regulations which include the following policy statement, applicable to both the nuclear and non-nuclear fields:

> "While waivers are to be granted only in conformity with the specific minimum considerations and under the carefully delineated conditions set forth in 9-9.109-6, it is recognized that waivers comprise a necessary part of the commercialization incentives available to ERDA. It is intended, therefore, that waivers will be provided in appropriate situations to encourage industrial participation and foster rapid commercial utilization in the overall best interest of the United States and the general public." (emphasis added)

This policy statement and subsequent explanations of the new ERDA patent policy by ERDA staff would appear to encourage a more liberal approach toward the granting of waivers as a method of carrying out ERDA's mission to promote the development of improved energy sources.

In my opinion, ERDA should not encourage waivers of Government patent rights. Waiver authority should be exercised sparingly so that technology developed at Government expense can be made available to all segments of the public and not monopolized by individual contractors.

Some contractors--especially large contractors--and the patent lobby traditionally advocate that contractors should retain exclusive rights to technology developed at Government expense. They argue that without such rights, contractors will not accept Government contracts or be willing to invest the necessary personnel and other resources to do Government work. They contend that few Government-owned inventions are used in comparison to privately-owned inventions, and that granting exclusive rights to contractors will encourage private investment, speed up commercialization, enhance competition, and encourage maximum industrial participation.

I believe these arguments are invalid for the following reasons:

a. The opportunity to make a profit, and to develop at Government expense additional technological capabilities that will better enable them to obtain future contracts should be

sufficient inducement in nearly all cases to obtain industry participation in ERDA programs. Industry lobbyists, in opposing unwanted regulations, frequently threaten that their clients will refuse to accept Government contracts. They used the same argument in opposing the establishment of the Cost Accounting Standards Board, the continuation of the Renegotiation Board, and other forms of regulation. Yet many of these very same contractors continue to lobby extensively to get new contracts.

b. To make the technology developed at Government expense available for public use, tends to enhance competition, not restrict it. In this way, any firm can use and expand upon Government financed technology.

The transfer or application of new technologies is furthered when the Government makes publicly financed technology available for general use. Some contractors have complained that the Atomic Energy Commission policy of retaining title to inventions developed at Government expense is too restrictive. In the Shippingport reactor project the Government published the technology, and any firm so desiring could use it. That project was the forerunner of the pressurized water reactors now being used extensively in the civilian nuclear industry. Contractors were willing to accept contracts without the promise of getting exclusive rights to the technology. Public disclosure of the technology did not impede the development or the commercialization of nuclear energy. To the contrary, had the contractors involved in the Shippingport project or other AEC projects been given exclusive rights to the technology, it would not have been as rapidly or as widely disseminated. Nor would there be as many firms as there are today participating in the nuclear industry.

For the above reasons, I recommend that the new ERDA patent regulations be revised so as not to encourage contractors to request waiver of Government patent rights, and that ERDA personnel be not encouraged to grant such waivers. Waiver authority should be reserved for those rare cases where essential work could not otherwise be obtained or where the Government elects to participate in an on-going, contractor-funded program in which the contractor bears a substantial portion of the cost. In such case the Government's rights to patents should be commensurate with the amount of the Government investment. The former AEC policy with regard to rights in inventions developed under allowable Independent Research and Development projects would be a reasonable approach.

I believe that the mission of ERDA in promoting the commercialization of alternate energy sources is best served when technology developed at Government expense is available for use by the public, and not reserved for the sole use of those contractors holding ERDA contracts. Congress, in the Atomic Energy Act and in the Federal Non-Nuclear Energy Research and Development Act, has properly mandated that inventions developed at public expense should belong to the Government. In my considered opinion the purpose of the Government taking title to such inventions is defeated if ERDA adopts a liberal waiver policy.

H. G. Rickover

Encl:
As stated

Copy to:
Dr. Richard Roberts,
Assistant Administrator for Nuclear Energy

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

26 JUL 1976

MEMORANDUM FOR THE DIRECTOR, PROFIT '76

Subj: Proposed Department of Defense Policy Changes Entitled "Profit '76"; recommendations concerning

Ref : (a) Your Memorandum dtd 3 Jun 76
(b) H. G. Rickover Memorandum dtd 17 Nov 72 for the Assistant Secretary of Defense (Installations and Logistics)

1. I have recently reviewed certain proposed changes to Department of Defense profit policy which were distributed for comment by reference (a). The proposed changes would restructure the factors used in setting prenegotiation profit objectives and would make the imputed cost of facilities capital an allowable cost for negotiated defense procurements. These changes are directed toward placing greater emphasis on investment and less on cost in arriving at acceptable negotiated profits. This memorandum provides my comments and recommendations on the proposed changes.

2. Cost Accounting Standard 414 sets standards for measuring the cost of facilities capital. Since this cost is presently unallowable on defense procurements, it must currently be absorbed in profits. Contractors take this into account in negotiating profits. Therefore, if the cost of facilities capital is now to be made allowable, a commensurate reduction should be made in profit levels currently being negotiated. Otherwise, the proposed changes would unnecessarily increase the cost of goods and services procured for the Defense Department.

3. The proposal to restructure existing profit factors has been suggested as a means of motivating contractors to invest in defense work and to respond to criticism that profit objectives based on estimated cost in an area of limited competition have the effect of rewarding high cost contractors with higher profits. The proposed change apparently is aimed at paying higher profits to contractors with a large investment in Government work and lower profits to contractors who have smaller investments.

4. I have long advocated that greater consideration should be given to contractor investment in determining negotiated profits. Return-on-investment is the measure of profitability most commonly used by businessmen and investors. It should be

considered also by the Defense Department in evaluating profits and in establishing profit objectives on negotiated defense contracts.

5. In 1972 the Defense Department attempted to move toward an investment-based policy by establishing an alternative profit procedure--"Contractor Capital Employed Policy." However, as I pointed out in reference (b), this procedure was defective in that it (a) established profit levels too liberal relative to industry norms; (b) lacked appropriate safeguards and standards for calculating return-on-investment; and (c) made no provision for monitoring actual profits.

6. The changes proposed in reference (a) are also aimed at greater consideration of contractor investment. However, in my opinion, implementation of these recommendations will not achieve the intended purpose for the following reasons:

a. According to the proposed profit policy, 90 percent of profit objectives will continue to be based on cost related factors, not investment.

b. Considerations other than the DOD profit criteria, such as cash flow, taxes, and future business prospects, will in all likelihood determine whether a contractor invests in new facilities. Most defense work is performed on general purpose machinery with low risk of obsolescence. As long as existing facilities are adequate to do the job, it is rarely to a company's advantage to invest in new facilities before they are needed. The addition of another factor in the weighted guidelines analysis would not alter this situation.

7. In my view, the proposed changes in the Defense Department's method of evaluating negotiated profits will drive up defense costs without any measurable improvement in facilities or performance. The following points are germane:

a. Given the flexibility of weighted guidelines and the noncompetitive nature of much of the defense industry, the Defense Department is in a poor position to implement changes in profit policy which do not have industry support. In my view, defense contractors will not support a new profit system unless they anticipate higher overall profits. Thus, contractors who can justify higher profits based on larger current investments will demand them; those who cannot will insist on at least maintaining present profit levels.

b. The Profit '76 study has elicited much discussion, both within and outside the Government, concerning the adequacy of profit levels on defense work. Some defense contractors

perceive the study as a move to increase negotiated or "going-in" profits on defense contracts. The prospect of reimbursement for the imputed cost of facilities capital without commensurate adjustments in negotiated profits furthers such expectations.

c. Past changes in Defense Department profit guidelines have led to increased profits on defense contracts with no discernible improvement in performance. According to Defense Department statistics, negotiated profits on defense contracts have increased by about 21 percent since the adoption of weighted guidelines in 1964, despite the contentions of the original DOD sponsors of weighted guidelines that there was no intent to raise profits. Weighted guidelines were defended on the basis of being a more rational approach to profit analysis. However, the same contractors who did most defense work before weighted guidelines continued to do essentially the same work afterward but with higher "going-in" profits.

d. The fact that contractors continue to accept negotiated contracts is evidence that current "going-in" profits are adequate. However, some defense contractors complain that actual, or "coming-out," profits are too low. To the extent contractors incur higher-than-anticipated costs during contract performance, their "coming-out" profits will be less than negotiated "going-in" profits. Therefore, rather than establishing profit criteria that would increase "going-in" profits across the board, emphasis should be directed toward improved cost control and cost estimation by defense contractors whose "coming-out" profits fall substantially short of negotiated objectives. Increasing "going-in" profit levels will increase the overall cost of national defense while providing little protection in the case of a contractor who incurs cost overruns.

8. I agree with your desire to place greater emphasis on investment in establishing negotiated profit objectives. However, I believe this could be accomplished more directly and at less cost to the Government if, instead of implementing the changes proposed in reference (a), the Defense Department would proceed as follows:

a. Require that contractors report actual profits on a return-on-investment basis. Maintain this data and comparable data on non-defense work in a central file for use within the Department of Defense.

b. Continue to establish profit objectives in accordance with the existing weighted guidelines method. Compare the results with return-on-investment data and adjust the

negotiated profit objective upward or downward to establish a reasonable profit level in terms of return-on-investment.

c. Require Contracting Officers to evaluate and justify weighted guidelines profit objectives against return-on-investment data from the contractors and from the historical data in the central file.

9. I appreciate being given the opportunity to comment on reference (a). I would appreciate being advised of what action you decide to take with regard to my recommendations.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Installations and Logistics)
Assistant Secretary of the Navy
(Financial Management)
Chief of Naval Material
Commander, Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
30 Apr 1977

MEMORANDUM FOR THE ASSISTANT SECRETARY OF THE NAVY
(RESEARCH AND DEVELOPMENT)

Via: (1) Commander, Naval Sea Systems Command
(2) Chief of Naval Material

Subj: Patent rights to technical data and to inventions developed at Government expense under Independent Research and Development Program

Encl: (1) Article from the New London News of November 30, 1976

1. In prior correspondence to the Chief of Naval Material and your office and in testimony to Congressional committees, I have pointed out that one of the failings of the Defense Department's Independent Research and Development (IR&D) Program is that the Government might pay virtually all the costs of developing technical data, whether patentable or not, and the contractor gets the rights to such data or inventions.

2. The attached article from the New London News illustrates my point. The article describes a device developed by Electric Boat which controls the growth of marine life on heat exchangers to be used in proposed Ocean Thermal Energy Conversion Plants. I asked whether the Government had any rights to this invention since virtually all the work performed at Electric Boat is under Navy contracts which provide for the Government to acquire title to inventions developed under Government contracts. The answer was that the Government does not have any rights to this invention because it was developed under Electric Boat's IR&D Program. DOD policy is to let contractors obtain title to inventions and technical data developed with IR&D funds even though these funds are provided by the Government.

3. Therefore, in the case of a contractor like Electric Boat, where almost 100% of the work is for the Navy, the Government pays nearly the entire cost of the contractor's IR&D program while receiving virtually nothing in return. NAVSEA has urged in the past that IR&D at Electric Boat be disallowed pointing out that most of the projects proposed are not of interest to the Navy, nor would the Navy spend its own funds on such projects if given a choice.

4. In the past, NAVSEA has recommended that comparable funds be redirected into the Research and Development area. NAVSEA could contract directly with contractors for those items which are considered to warrant public funding, and the Government, not the contractor, would retain the rights to technical data and inventions developed under such contracts.

5. On the basis of this further example of the continued mis-direction of public funds, I recommend that you, as the senior Navy official responsible for research and development, work to change the Defense Department's policies on IR&D in order to stop this wasteful expenditure of scarce public funds. I would appreciate being informed of what action you take in this matter.

H.G. RICKOVER

Copy to:
Assistant Secretary of the Navy
(Installations and Logistics)

EB patent may boost possible emergy solution

By Stephen Urban

Groton

A device which could solve one of the most stubborn problems with ocean thermal energy conversion (OTEC) has been patented by General Dynamics-Electric Boat, The News has learned.

The device, designed to control the growth of marine life on the critical heat exchangers in the giant OTEC electrical plants being proposed, was granted a patent Oct. 5. The revolutionary OTEC power plants will drive turbine generators using the difference in temperature between surface and subsurface sea water.

And while some energy experts question whether the EB system, developed for submarines but reportedly not used, can be applied to the OTEC plants, they do agree it may represent the tip of a guarded technological iceberg at EB which may prove invaluable to the alternative energy program in this country.

General Dynamics officials met a week ago with the federal official in charge of the OTEC program, Dr. Robert Cohen of the Energy Research and Development Administration (ERDA). The meeting was initiated by a General Dynamics official, B. Michael Klug, in charge of long-range planning, who has been considering the company's entry into the solar energy field.

Cohen said Monday he was unaware of the EB patent, but he has said the Groton Division was discussed at the meeting, and several ERDA officials agree the builder and designer of Navy submarines probably has much to offer their programs.

The News Tuesday, November 30, 1976

OTEC power plants will use the difference in temperature between surface water and deep ocean water to alternately evaporate and condense ammonia to drive turbines which generate electricity.

But biofouling, the growth of algae and other marine organisms, can play havoc with the giant heat exchangers involved, which may be as tall as a seven-story building.

It is known that chlorine gas, in relatively small amounts, can stop such growth, but chlorine gas storage is extremely hazardous, and various forms of chlorine are difficult to store and lose effectiveness quickly.

EB's device generates chlorine when needed through the electrolysis of sea water. The patent states "the invention may be utilized in sea water cooling systems, such, for for example, as heat exchangers which provide condensers associated with steam turbines in shoreline or offshore power plants."

The apparatus was designed before 1974, when the patent application was filed. Early this year, an attempt was made to forward information on the device to the Energy Research and Development Administration, but the EB Submarine Technology Committee vetoed the suggestion on the grounds the company might be accused of divulging submarine technology.

ERDA sources have suggested Adm. Human G. Rickover, head of the Navy's nuclear propulsion program, might be guarding the technology developed by Navy contractors such as EB.

Now the patent has been issued, the existence of the invention is public information. But its use is governed by EB, which also might have to provide background data and help in applying the technology to OTEC plants or other uses.

There has been speculation from ERDA and private industry sources that General Dynamics may be planning to use some of its technology, including the biofouling control device, for its own profit. Any such plans are being kept secret, however, a corporate spokesman terming the meeting with the ERDA official "exploratory."

Biofouling and metals corrosion, two areas in which EB reportedly has much expertise, have been listed by ERDA as two areas requiring "extensive research and technology testing" before the OTEC program can succeed. In fact, a laboratory on the west coast has been contracted to work on the biofouling problem which some OTEC experts believe has already been solved.

Criticism of ERDA involves not only the lack of technology transfer to and from other governmental agencies, but alleged stalling on the OTEC project, which has the theoretical potential to replace nuclear power as the country's future source of electricity.

Ocean thermal energy, says its proponents, needs only the sun for fuel, is non-polluting, and is versatile in its applications; the power also can be used to produce chemicals, fuels, and metals at sea, processes which are guzzlers of electricity. And the projected cost of OTEC is said to be competitive with oil and nuclear-generated power, and may be cheaper if the Arab oil producers continue to increase prices.

J. Hilbert Anderson, the pioneer of OTEC and president of Sea Solar Products, Inc. of York, Pa., is a former refrigeration expert at Borg-Warner who was responsible for developing the refrigeration used on Poseidon submarines designed at EB before 1960.

Anderson's big complaint is not with the Navy but with ERDA, which he said "spends millions on studies and studies and studies and studies and never gets hardware built."

The only working model so far of an OTEC plant has been built by Anderson, but he said ERDA "is trying to sabotage the whole project with dead end work," and has ignored his company's developments in the field, contracting out the work to companies "that put warm bodies on a project and produce studies that are a bunch of junk."

ERDA, he pointed out, is the successor to the Atomic Energy Commission and several other energy-related agencies, and anything that threatens nuclear power is "killed with faint praise and kindness."

Asked his opinion of the EB patent, of which he has a copy, Anderson said "we know chlorination works; I don't know whether it's practical or not." He said depriving marine life of oxygen works as well, and Sea Solar Power has developed such a system.

But further development is being stalled by lack of money, and Anderson's company has stopped receiving ERDA contracts. His proposals, he said, are ignored by ERDA, the only agency developing OTEC.

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

26 JUL 1977

The Honorable Lee Metcalf
Chairman, Subcommittee on Reports,
Accounting and Management
Committee on Government Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Your letter of June 28, 1977 requested my comments on the testimony of the Securities and Exchange Commission in hearings on the accounting establishment before your subcommittee on June 13, 1977. You specifically requested that I comment on the SEC's report to the subcommittee on whether the SEC has the statutory authority to implement recommendations which I made to your subcommittee in testimony on May 27, 1977.

The General Counsel of the SEC, in a memorandum dated June 10, 1977 to the Chairman of the SEC, advised that with one exception the SEC has the authority under existing law to implement my recommendations to the subcommittee. However, in general, the SEC General Counsel stated that implementation of my recommendations was either unnecessary or undesirable.

Notwithstanding the SEC General Counsel's opinion on the advisability of adopting these recommendations, SEC Chairman Williams, and three members of the Commission, in testimony before you on June 13, committed the Commission to take certain actions, many of which parallel the recommendations I made to your subcommittee. The program outlined by Chairman Williams, and my comments on the program, are as follows:

a. The SEC is disappointed in the "priorities and productivity" of the Financial Accounting Standards Board and will "pursue a vigorous program" of overseeing the establishment by the private sector of financial accounting and auditing standards.

Comment: The SEC commitment is encouraging. However, in addition the SEC should repeal its official policy, adopted in 1973, that standards set by the Financial Accounting Standards Board are automatically accepted by the SEC.

Instead, the SEC should review and either approve or disapprove each standard recommended by the Board. Moreover, I recommend that the subcommittee require that the SEC identify specifically what new financial accounting and auditing standards are needed and establish a schedule for promulgation of these standards. In this way there will be a basis in future for measuring the progress of the SEC and of the accounting profession in setting standards.

b. The SEC endorses the recommendation of the Commission on Auditors' Responsibilities that the accounting profession establish a board for setting auditing standards for the accounting profession.

Comment: With proper SEC oversight such a board should be an improvement over the present system in which auditing standards are set by a committee of the American Institute of Certified Public Accountants. However, the SEC should not give advance approval to the work of this Board. Instead, it should review and either approve or disapprove each standard.

c. The SEC will initiate a rulemaking proceeding requiring disclosure by companies seeking to sell stock to the public, of all services performed by the company's independent accountant with a listing of the fees the company has paid for those services.

Comment: This is a step in the right direction. However, as I testified to your subcommittee, accounting firms should be required to divest themselves of the so-called management advisory services they presently offer to their clients. At a minimum, I recommend that the SEC prohibit accounting firms from selling management advisory services to the same client they audit for SEC purposes. This would help eliminate the potential conflict of interest which is inherent when accounting firms sell both management advisory services and audit services to the same client.

d. The SEC will solicit public comment on whether certain types of so-called management services which accountants perform for publicly held companies are so inconsistent with or unrelated to audit functions that the SEC should prohibit the furnishing of such services by the company's accounting firms.

Comment: I agree with this proposal but consider that the SEC should go even further in controlling management advisory services, as I noted above.

e. The SEC will strengthen its existing requirements for public disclosure related to the dismissal of an accounting firm by a publicly held company.

Comment: I agree.

f. The SEC considers that all publicly held companies, whether or not listed on a stock exchange, should establish independent audit committees, and will consider taking action to effect such a requirement.

Comment: I agree that all publicly held companies should establish independent audit committees. However, I share the concerns outlined by Senator Percy when I testified to the subcommittee that the requirement for audit committees adopted by the New York Stock Exchange does not define strictly enough the independence required for audit committee membership. For example, as Senator Percy observed, under the New York Stock Exchange requirement it is possible for a company's banker or outside counsel to sit on the company's audit committee. I recommend that the subcommittee make clear to the SEC that it expects action to be taken on this item and that a stricter definition of independence is required for audit committee membership.

g. The SEC will submit an annual report to Congress, starting by July 1, 1978, on the progress the accounting profession is making on the issues raised in your hearings and on the need for further action.

Comment: I agree.

Although the program outlined above generally is encouraging, other aspects of the SEC's position on the issues raised in your hearings are disappointing. Specifically:

a. Although the SEC is skeptical of quality control reviews performed by one audit firm of another, the SEC proposes to take no action to assure that these so-called peer reviews are accomplished in a truly objective fashion. Moreover, although Chairman Williams acknowledges that universal procedures for such reviews would be valuable, the SEC does not propose to make quality control reviews of audit work a recurring requirement. Finally, the SEC proposes to leave to the discretion of the profession other steps related to insuring audit independence such as the rotation of partners assigned to a given client and the concept of requiring a review of audit work by a partner other than the partner responsible for the audit.

I recommended in my testimony to your subcommittee that the SEC periodically supervise audits of the performance of public accounting firms. My concept was that the audit team should be drawn from several accounting firms with an SEC representative as head of the team. My approach to the composition of audit teams is similar to the one outlined by Chairman Williams in his testimony. I recommend that the subcommittee in its report make clear to the SEC and to the profession that it expects thorough and objective audits of the quality of performance of public accounting firms. Further, the SEC should step in to require such audits if the profession does not do so itself promptly, or if the response of the profession does not insure thoroughness and objectivity.

b. The SEC, in its prepared testimony, dismisses as not necessary, a proposed requirement that auditors disclose relevant financial, operating and client data. However, later in the hearings, Chairman Williams agreed with Senator Percy that if accounting firms themselves made public disclosures they might be in a better position to insist that their clients disclose matters of significance to the public more openly. I recommend that the subcommittee follow-up on this item and request the SEC to take action requiring accounting firms to disclose financial, operating and client data. This could take the form of registration with the SEC of the accounting firms of publicly held companies.

c. In his memorandum of June 10, the SEC General Counsel dismisses as potentially misleading my recommendation that the SEC require companies which report profits and losses on a percentage-of-completion basis to also inform stockholders what the results would be under a method of accounting based on completed contracts or completed units. He contends that where percentage-of-completion accounting is employed, it is the preferred accounting alternative.

In my opinion, neither the SEC nor the public have yet recognized the potential for company officials to distort profit figures under the percentage-of-completion accounting method, and the inability of certified public accountants to verify these profit figures which are based largely on management representations. The potential for abuse inherent in percentage-of-completion accounting was amply documented in my testimony to your subcommittee. My recommendation for supplemental disclosure in reports to stockholders is but a beginning attempt to make it more difficult for a company to report overly optimistic earnings. Presumably, the public would become suspicious of companies which consistently reported lower profits on completed contracts than they reported under percentage-of-completion accounting.

Adoption of my recommendation for supplemental reporting to the public would be a useful first step in this area by the SEC. Also, the SEC should investigate, by way of public hearings, the uses and abuses of percentage-of-completion accounting and determine effective means of verifying profit and loss figures calculated under this system. Finally, the SEC should require that the representations made by management to public accountants in connection with percentage-of-completion accounting be reduced to writing pursuant to Statement on Auditing Standards No. 19 which was recently issued by the Auditing Standards Executive Committee of the American Institute of Certified Public Accountants. The SEC should require that such company representations be disclosed in public documents the company files with the SEC and companies should be held legally responsible for the truthfulness of its representations.

Chairman Williams was correct when he observed that there is "growing dissatisfaction with the performance of the accounting profession." I do not, however, agree with his statement that "time is running out for the profession to reform itself." In my view, the profession's time has been up for some time. Any additional time given by the SEC or by your subcommittee for self-reform should be recognized as a grace period of borrowed time.

I hope that your subcommittee will make this clear to the SEC and the profession in your report on these hearings and that you will sharply define the criteria by which you will measure whether the SEC and the profession have met their public responsibilities. I also hope you will give consideration to the recommendations made in my testimony and in this letter in defining these criteria for measurement.

I appreciate the opportunity to comment on the SEC's testimony and to provide my own recommendations to you. Please let me know if I can be of further assistance.

It was indeed a privilege to testify before your Committee.

Respectfully,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

19 Sept. 1977

Mr. Benjamin Hooks, Executive Director
National Association for the Advancement of Colored People
1790 Broadway
New York, New York 10019

Dear Mr. Hooks:

Thank you for meeting with Mr. Foster of my staff on 9 September to discuss the need for National Scholastic Standards proposed by me to Senator Pell's Subcommittee on Education.

Mr. Foster told me his discussion with you was encouraging. He said that while you did not necessarily agree with all in my statement, you did support establishment of a national panel to set standards--providing minorities were represented. He also said you endorsed testing students against these standards at frequent intervals, provided the test questions were not phrased in a manner that presumed a white upper-middle class background.

According to Mr. Foster, you then asked your educational specialist to draft a letter of endorsement along the lines you indicated and sign it for you since you had to leave. What happened thereafter largely nullified the benefit of his meeting with you. Attached is Mr. Foster's report.

The letter prepared and signed for you by your educational specialist is of no use to me. It is written in "educationese" and makes little sense to me or to others who have read it. Mr. Foster's report states that despite his repeated efforts your educational specialist was unwilling to simplify the language, insisting that the letter was clear, that it reflected NAACP policy and that it was consistent with your comments during the morning meeting with Mr. Foster.

In my experience I have found that unclear and complicated writing is generally an indication of unclear thinking. Therefore, I did not use her letter during my testimony before the House Subcommittee on Education for fear it could reflect adversely upon you and your organization.

The development of National Scholastic Standards such as those I proposed would be of great help to all children. This is especially true of black children, of whom a disproportionate number are shunted into so-called "special education" or remedial classes, according to the NAACP Report on Testing. As I am sure you are aware, I consider all children to merit the best education we can possibly give them; that this is the primary function of parents and legislatures as well as schools.

Should you still be willing to support this concept, I would be most appreciative of receiving a simple letter from you to this effect along the lines of the statements you made to Mr. Foster.

Sincerely,

H. G. Rickover

Attachment:
1. T.L. Foster memo to me dtd 9/9/77
2. NAACP letter to me dtd 9/9/77

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
17 January 1978

Mr. Charles J. Zwick
Chairman
President's Commission on Military
Compensation
666 - 11th Street, N.W., Suite 520
Washington, D.C. 20001

Dear Mr. Zwick:

This is in response to your letter of 6 January 1978 which asked for my personal views on military compensation. My answers to the questions you raised are attached.

The fundamental question facing your Commission is what should be done to attract and retain a capable military force at a reasonable cost. In my opinion, this question goes beyond the area of pay, allowances, and benefits. It extends to issues affecting the efficiency of the Defense Department.

As explained in my answers to your questions, I believe the performance and morale of military people would be enhanced by eliminating unnecessary organizational layers and paperwork; by consolidating military activities; by reducing the number of officers, particularly flag rank and other higher rank officers; and by avoiding unnecessary personnel relocation.

I also believe it would be better for all concerned if military personnel were paid a given salary rather than having to operate under today's confusing system of pay, allowances and fringe benefits. A salary system would be simpler and more equitable than the present system. Military personnel as well as the public would then have a better appreciation of how much they are actually being paid. Salaries might also reduce public criticism of military benefits and help lessen the actual and perceived erosion of benefits among military people.

While shifting away from so many fringe benefits, we should encourage those military people we need most to pursue careers of thirty years or more. Those selected out of the

military with five or more years service, should receive a lump sum payment and a smaller, deferred, retired pay starting at age 60 or 62. In addition, retired military personnel employed by the Federal Government should not be paid in total more than the approved Federal civilian salary for the job held.

In revamping military compensation, a phase-in period will be needed to avoid inequities. Most important, each change in the compensation system must be fair, and so perceived by those in and out of the military service.

If I can be of further assistance, please feel free to so request.

Sincerely,

H. G. Rickover

H.G. Rickover

Encl:
As stated

Copy to:
Chief of Naval Operations
Chief of Naval Personnel

RESPONSE OF ADM H.G. RICKOVER TO QUESTIONS FROM THE PRESIDENT'S COMMISSION ON MILITARY COMPENSATION
17 JANUARY 1978

1. QUESTION: What military personnel management policies should be examined in conjunction with improving the military compensation system?

ANSWER: The President's Commission on Military Compensation cannot merely look at compensation alone. The fundamental problem is to decide what should be done to attract and retain an effective military force at reasonable cost. Consideration should be given to how the military services go about acquiring, training, transferring, promoting, and using military people. We cannot afford wasteful manpower spending at the expense of weapons.

I have testified many times that our military personnel structure is top-heavy with rank and that this contributes to inefficiency. At the peak of World War II there was one flag or general officer for every 6,000 men. Today there is one such officer for every 1,800 men. Stated differently, we could reduce the total of flag and general officers by two-thirds and still maintain the same ratio to military personnel we had at the peak of World War II. The staff of the Chief of Naval Operations now has about twice as many admirals as were assigned to Fleet Admiral King's staff at the height of World War II. While the acceleration of military technology has tended to increase the officer-to-enlisted ratio, I do not believe we need the large number of admirals and generals we have today. In fact, the large number of flag rank officers results in a decrease in efficiency.

I recommend reducing the overall flag and general officer strength ten percent each year for the next five years. Half of this yearly reduction should be through stricter selection, the other half through forced retirement of flag and other senior officers.

In my opinion, the elimination of unnecessary flag, general, and other high ranking officer billets would help the retention of our most capable officers. Further, there should be a concurrent reduction in staffs that would eventually reduce the officer and enlisted grade structure. These reductions would lead to the elimination of many military and civilian billets and might help put a damper on civil service grade inflation.

Another wasteful practice -- transferring military people from one location to another every year or two -- should be stopped. In 1977, the Defense Department spent $1.6 billion on personnel transfers. But this figure does not include the cost of time wasted in transit and in the relieving process.

In addition to the high cost, frequent personnel transfers are disruptive. They create hardships on military people and their families and foster mediocre performance. Often some of our best people leave the military to escape the disruption of moving their families so frequently. Moreover, with the high turnover rate, servicemen have insufficient time to learn their jobs. Rarely are they on a job long enough to see the results of their efforts or to be held accountable for them. Consequently, there is a premium on satisfying one's transient superiors and not "making waves." Officers become jacks-of-all trades. True responsibility for actions is never realized under the fragmented, short tour concept.

The officer postgraduate education program is another wasteful aspect of military personnel policy. For many years, the services have provided large numbers of officers with advanced degrees. The need for these degrees is not well-defined, and the courses that most officers take rarely relate to the needs of the service, except in a vague and general way. It is my opinion, from many years of service and experience, that few jobs in the Navy require a graduate degree, particularly in the non-technical areas where most naval officers conduct their studies. Postgraduate education has become, in most cases, a fringe benefit where an officer can, at Government expense, improve his credentials for a job after he leaves the military. Moreover, postgraduate schooling is widely perceived by officers as enhancing chances for promotion. So, regardless of the value of these programs or his interest in them, an officer must apply for these programs in order to "get ahead" -- to acquire "Brownie points."

Except for the few postgraduate courses that can be justified by the military, the service postgraduate education programs should be abolished. No industrial organization would be viable if it devoted a fraction of the time educating their officials as does the military; it is a boon-doggle.

The concept of an All Volunteer Force should also be reevaluated. It may be that no amount of pay and benefits will be sufficient to attract and retain an All Volunteer Force of the size and quality required. In March 1977, the Senate Subcommittee on Manpower and Personnel heard testimony about trends indicating poor military effectiveness: rates of non-judicial punishment have increased thirty-five percent since Vietnam-era levels; the rate at which servicemen are leaving before completing first enlistment has increased substantially; twenty-five to thirty percent of active enlisted personnel stated in a survey that they would try to avoid or probably refuse to serve in combat situations, depending on the nature of the emergency.

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Each year, for the next fifteen years, the number of males in military age groups will decline substantially. It is unlikely that there will be further large increases in military compensation as there have been over the past decade. Thus, the problems of the All Volunteer Force can be expected to continue.

Some argue that the All Volunteer Force is socially preferable to conscription. They say that under the previous draft system, many young men of well-to-do families were able to evade the draft through deferments for higher education. A disproportionate number of draftees therefore came from the lower economic strata of society.

The All Volunteer Force practices a similar kind of economic discrimination. The high rate of unemployment among minorities and the poor has contributed to their carrying a disproportionate share of the defense burden.

If we cannot maintain an All Volunteer Force of the size and caliber needed, it may be necessary to require our citizens to serve a few years active duty in the military or some other form of national service. An impartially administered draft could help avoid inequities and might help the military obtain its proper share of educated people. Further, the military training they receive would be an invaluable asset in the event of mobilization.

2. QUESTION: What organizational and administrative changes should be made to get more from our military people in return for their compensation?

ANSWER: The effectiveness of the military could be enhanced by eliminating unnecessary organizational layers within the Department of Defense. Excessive layering is detrimental to performance and morale. Senior officials are too far removed from facts. The extra layers of management delay work, waste time, and dilute responsibility. Moreover, large numbers of people are required to staff the offices at each layer. In many cases, the "checkers" outnumber the "doers."

In the Navy, the Naval Material Command is a prime example of this widespread problem. About ten years ago, the Navy's material functions were reorganized along the lines of the Air Force. Four technical bureaus were eliminated and their functions assumed by six new "Systems Commands." Superimposed upon these systems commands was the office of the Chief of Naval Material, a new large bureaucracy which added more layers of management. This headquarters staff, referred to as the Naval Material Command, has since grown to about 600 people, one-third of whom are strictly overhead, existing only to support the office of the Chief of Naval Material itself. The Office of Management and Budget at one time recommended abolition of this Command.

If this investment in manpower actually improved the material condition of the fleet, I would be for it. But, the extra organizational layers added by the Chief of Naval Material have only made it harder to do the job.

Unnecessary layering also results in a proliferation of "motherhood" directives and policy statements that clog the system and divert attention from primary functions. For example, I recently received a proposed Navy directive regarding material reliability. It was written as if controls and management systems would solve the problems. Such directives lull senior officials into believing that improvements are being made; in fact they are generally not helpful. In the Navy alone, there are literally thousands of these directives. No one in a normal tour of duty has the time to read, much less understand them.

Unnecessary organizational layers exist at nearly every level within the Department of Defense. They should be eliminated and authority returned to those directly responsible for the work. Strict controls are needed to preclude the build-up of new management layers and their staffs. The coupling of

authority and responsibility--a concept long espoused by the military--has been lost.

The undue reliance in the military on management information systems and systems analysis should also be stopped. The preoccupation with "management" in the Defense Department is stifling. At each level of the bureaucracy, people try to impress higher authorities by accumulating masses of information before making a recommendation.

Requests for this information are forwarded through the chain of command down to the lowest echelon technical manager. He then is required to translate actual situations facing him into "management information" forms prescribed by his superiors. By the time he answers all of the questions raised by the many principals and individual staff personnel, including the new breed of theoretical management experts, little time remains for him to actually manage his given job.

A working level manager faces countless people in staff positions in organizations senior to his own. Each of these can make demands on his time and require him to justify his actions. As a result, there are currently thousands of people--military and civilian--employed at headquarters levels within the Department of Defense, preparing, typing, copying, and distributing volumes of management reports which necessarily receive only a cursory review before being filed. Large numbers of personnel could be removed from such staffs. Not only would there be no loss in efficiency, in actuality, the elimination of senseless "paperwork" studies and reports would enhance efficiency.

What I have just said is a truism, and is recognized in all business organizations, where profit is the guiding motive. But not so in Government, which appears, in measure, to conceive its function, as an agency to employ those not needed by business. For some Government organizations this may do little harm; for the military it can be deadly.

Manpower requirements could be further reduced by consolidating and unifying military shore establishments. Why is it necessary to have both a Naval hospital and an Army hospital in the same city? An airfield for the Navy and another for the Air Force? Military training commands, supply management, and inventory control offices, and other shore establishments could be combined, with a savings in personnel requirements and other resources resulting.

3. QUESTION: There has been much talk among the military about a continued erosion of military benefits. What are your views on this matter?

ANSWER: Special interest groups, which naturally favor the status quo, and the military press have given widespread coverage to cutbacks in military benefits and their adverse impact on morale and retention. Military people are said to be particularly concerned about deterioration in military medical care and civilian health services and about the possibility of reduced retirement, commissary, exchange, and recreation benefits. Our servicemen purportedly believe that they are losing ground and are apprehensive about the security of a military career.

Except for medical care, the actual cutbacks in military benefits are more perceived than real. In July, 1977, the Senate Armed Services Committee conducted hearings on unionization of the Armed Forces. The report of those hearings lists the actual benefit changes during the past five years that affect service members, their families, and those retired. From this report, it appears that the reductions in military benefits have been more than offset by changes economically advantageous to military people.

It is difficult to determine the actual economic impact of changes in military benefits, because of the many different benefits available to various categories of people in differing amounts, depending on particular circumstances. It is difficult for the Department of Defense, Congress, or the serviceman himself to assess the actual monetary value of these benefits or to quantify proposed changes. The complexity of the military compensation system has made it vulnerable to public criticism and piecemeal attacks on various benefits. The well-publicized talk of potential cutbacks, as well as a few actual cutbacks in some areas, have in turn created in the minds of military personnel the exaggerated perception of a continued erosion of benefits.

The military compensation system would be far less subject to attack and more attractive to servicemen if the military converted to a salary system. This would be easier for the individual, the public, and the Government to understand.

4. QUESTION: The Commission has been told that maintaining a professional, motivated, and disciplined military force requires preserving the institutional character of military life through continuing traditional benefits such as Government housing, military health care, food, commissaries, exchanges, recreation facilities, and early retirement. Do you agree?

ANSWER: I see no necessary connection between the present form of military compensation and the maintenance of a top-notch fighting force. In fact, if we provided more pay in lieu of the large number of traditional fringe benefits, I believe we would have a more highly motivated and professional fighting force. I question that providing many services for military people and their families truly encourages the self reliance one wants in military personnel.

By joining the service, military people knowingly surrender some of their personal freedoms. They agree to accept assignments that may result in undesired duty, separation from family, long working hours, injury, capture, even loss of life. It is not possible to put a dollar value on some of these considerations. There is no valid rationale why a compensation system based on pay, allowances, and benefits is more appropriate in these circumstances than a salary system.

5. QUESTION: Where should military compensation levels be set in relation to pay in the private sector? Do you believe that current military compensation is comparable to pay in the private sector?

ANSWER: Given the problem of placing a value on military benefits, I cannot say with any certainty that the military is paid less, as much as, or more than their civilian counterparts. However, with the advent of the All Volunteer Force, it has been the expressed intent of Congress that military pay keep pace with civilian compensation.

Among those who study the subject, there seems to be a consensus that since about 1972, military pay -- consisting of basic pay and allowance for quarters and subsistence -- has been equivalent to civilian pay. In fact, a recent Senate Appropriations Committee report concludes that military pay is at least equal to civilian salaries and that, when fringe benefits are added to both military and civilian pay, the average military employee receives over four thousand dollars more annually than the civilian employee.

Since 1972, legislation has been enacted to help keep military pay in line with civilian pay. However, the method used is indirect. Military increases have been tied to civil service pay raises; these in turn are pegged, via a complex formula, to pay in the private sector. The validity of indirectly pegging military raises to the private sector has been the subject of considerable debate. Some argue that military compensation should be strictly competitive with that in the private sector. This would mean that the military should be paid whatever is necessary to attract and retain the required number and caliber of people over a long period. I agree. But this should be done in a manner that avoids frequent wide pay fluctuations.

A method similar to that used to tie Federal civilian pay with pay outside Government should be used to evaluate military pay levels in relation to those outside the military. Pay levels determined in this manner could be used as a guide in adjusting military pay schedules. To meet recruiting and retention requirements, it may, at times, be necessary to peg military pay for scarce skills somewhat above civilian compensation. The higher pay should be reserved for the special particular skills needed, and made applicable only as long as the shortage exists. Special pay should not be granted automatically as a form of recognition. For example, I see no valid reason why, in the absence of a bona fide shortage, pilots should continue to receive flight pay.

6. QUESTION: What deficiencies, if any, do you see in the existing structure of pay, allowances, and benefits? What changes do you recommend?

ANSWER: The major deficiency in our present military compensation system is its complexity and the fact that servicemen and their families cannot determine how much they are actually paid. Prior to World War II, the military constituted a small number who received low pay and liberal benefits. That system has survived. In it, the serviceman considers as part of his compensation, basic pay, tax free allowances for food and housing, military medical care for dependents, early retirement benefits, subsidized commissaries, exchanges, recreation facilities, etc..

Each of the many types of in-kind, contingent, and deferred benefits has its own entitlement rules. As a result, Department of Defense and General Accounting Office studies show that military people underestimate their total compensation. Since the value of fringe benefits is not visible in his earnings statement, his compensation appears to be small relative to his civilian counterparts. On this basis he may consider himself underpaid. Conversly, because a serviceman receives so many fringe benefits, the public may perceive him to be overpaid.

The tendency to compensate the military on the basis of "needs" rather than contribution to national security, proficiency skills, and manpower shortages, should be reevaluated. The military is virtually alone in its practice of calculating pay based on marital status and number of dependents, and in providing medical and commissary services where they are available commercially.

When a large part of a serviceman's compensation consists of fringe benefits, he must confine himself to the housing, medical care, shopping, and entertainment offered by the Government or he loses that portion of his compensation. Many servicemen would prefer their compensation in dollars so they could avail themselves of commercial facilities.

Compensation through benefits also tends to be inequitable. Where adequate Government housing, military medical care, commissaries, exchanges, and other facilities are available, the military man enjoys a substantial advantage over his counterpart on duty where such facilities and services are not available.

In 1966, the Hubbell Commission recommended converting the military to a salary system. This was also advocated in a Department of Defense study by the Brookings Institution in 1975; by the Defense Manpower Commission in 1976; and by the General Accounting Office in 1977. Those opposed contend that salaries would substitute marketplace standards for the institutional customs and traditions of military service, undermine morale, and hurt combat effectiveness; that salaries would be more costly and result in less take-home pay since a greater proportion of a serviceman's compensation would be subject to income tax.

Because the cost of many benefits are now buried in other parts of the budget, it is true that the apparent cost of military pay would increase under a salary system. However, true costs would not necessarily increase; in fact, they might be less.

Those opposed to a salary system often point to the difficulties Great Britain and others have with military salary systems in recruitment and retention. The fact that the United States faces similar problems shows that changing the form of military compensation does not, of itself, automatically eliminate these problems. It is my opinion that change to a salary system would simplify the problem of military compensation and be more equitable.

Specifically, I recommend:

1. Quarters and subsistence allowances and associated tax benefits should be eliminated, and included in salaries.

2. Members of the military occupying Government quarters should be charged closer to their fair market value. The Government should, over the years, minimize its role of providing housing.

3. Subsidized commissaries, exchanges, and recreation facilities should be phased out except where commercial facilities are not available.

4. Military dependent medical care should be phased out and replaced by civilian health insurance programs similar to those available to Federal civilian employees. Military medical personnel and facilities should be kept at the minimum level required to provide initial wartime medical care for military personnel.

5. To retain people in hazardous, arduous or undesirable duty, or those having scarce but essential skills, bonuses or special pay should be provided -- but only during the time recipients are actually providing the needed services. Each military service should have the flexibility to adjust such special pay or bonuses to meet changing manpower needs. Basic military salaries should not be set at a level which compensates all military people for the hardships or risks incurred by a few.

In revising the military compensation system the Government should not break faith with those already in the service. Therefore, the approximate value of benefits abolished, as recommended above, should be reflected in the salaries paid. This should result in a more understandable, measurable, and effective compensation system.

7. QUESTION: A twenty-year retirement is often defended as necessary to maintain a young and vigorous fighting force. Do you think the military services have placed undue emphasis on youth? Is the twenty-year retirement a good tool for keeping the right people in the military?

ANSWER: By allowing retirement with but twenty years service, the military retirement system is considerably more liberal than the Federal civilian retirement systems and nearly all private industry programs. Industry, state, and local governments generally start paying retirement benefits at age 60 to 65, depending on the number of years served. Civil Service pays retirement benefits at age 55 if the employee has 30 or more years of service; at age 60 after 20 years of service; and at age 62 with 5 years of service.

At one time, the liberal military retirement provisions were thought to be compensation for low pay relative to the private sector. Today, military pay is generally considered equal to civilian pay. Yet the right to early retirement and a lifetime retirement income remain.

Early retirement is being defended as a reward for the hardships of military life. I agree that military people must not be treated as second-class citizens economically or otherwise; that they should be paid adequately for performing duties unique to the military--for combat and other hazardous situations--and for arduous or undesirable duty. Such special compensation should be provided as specifically and directly as possible. But it does not follow that the best interest of the military or of the public is served by continuing costly retirement practices which do not accomplish this purpose.

It is inefficient and wasteful to provide all members of the military the option of a lifetime retirement income after but twenty years service. It makes more sense to provide special pay to those who perform unusually difficult or hazardous duty during the times they are actually engaged. I greatly doubt that to a young person the promise of retirement income twenty or thirty years hence provides as much incentive per dollar spent as special pay would provide, or is even a real motive for entering the military. This is a rationalization that comes with age--particularly by those who are not capable of fending for themselves and so devote their time to the nuances and intricacies of the pay system. I doubt people such as these possess the characteristics which lead to the development of a good warrior--or of any worthwhile endeavor.

Trying to enhance the attractiveness of the military through liberal retirement benefits may be far less effective per dollar spent than simply increasing salaries. As I noted earlier, one reason the military man believes he is underpaid is that although his total pay and benefits are in line with outside compensation, his pay check is smaller than his outside contemporaries'. In my opinion, the morale of the military would be better promoted by higher salaries than early retired pay. This is especially true of the young and energetic.

It has been said that war is a young man's business and that offering twenty-year retirements with lifetime retired pay helps maintain a young and viable military. Actually there are today few duties in the military that cannot be performed by persons up to 55 years of age or even older. For jobs requiring special demands, there should be qualifications, as there are for underwater demolition teams. For duties requiring extra risk or physical hardship, differential pay is more appropriate than increased retirement benefits for the entire military.

Twenty-year retirement is sometimes defended as necessary to thin out the ranks and enhance promotion opportunities. It is questionable that early retirement is the most appropriate way for this. Existing rules, which require at least twenty years service before earning the right to retired pay, at any age, make it difficult to discharge those unwanted or unneeded before they complete twenty years. There is an understandable reluctance to separate a person after, say 10 to 15 years service, since he would then not be eligible for any military retirement benefits at any age. Consequently, we retain marginal people who bide their time aimlessly in the military until they complete twenty years service and can draw retired pay. These set a poor example to their juniors.

Twenty-year military retirement provides some marginal people the incentive to remain in the military; it also provides the incentive for many of the better ones, those who can make out on the outside--to turn to civilian careers immediately upon completion of twenty years service.

An article in the Navy Times in December, 1977 states that fifty-two percent of military officers eligible to retire, and seventy-five percent of the enlisted force, leave by their twenty-third year. No doubt, some would probably have retired sooner had they not been recently promoted and required to remain in the service for another tour of duty.

A retirement system that leads to widespread early retirement, that encourages the best to leave after but twenty years and marginal people to remain, is not sound for maintaining a military force of the proper size and caliber.

8. QUESTION: What changes should be made in the military retirement system? What should be considered a full career? When should retired pay commence? How should retired pay be budgeted? Should the retirement system be contributory?

ANSWER: The practice of the military to begin receiving retired pay after but twenty years of service should be phased out. Rather than an effective device for attracting and retaining the right people, early retirement is inefficient, counterproductive, inequitable, and costly.

The twenty year retirement encourages marginal people to stay for twenty years and the best to leave after but twenty years. The option of retiring after twenty years denies the military sufficient flexibility to retain those desired and to separate those no longer needed or wanted. The existing system deprives those leaving prior to twenty years of any retirement benefits, and provides severance pay only to officers involuntarily separated. In contrast, most federal, state, and local government retirement systems permit those with five, ten, or fifteen years service to start drawing some retirement income at a later age. Depending on the number of years served, retirement pay starts at 62, 60, and in some cases 55. Under the Pension Reform Act of 1974, private industry retirement plans offer a deferred retirement income on completion of at least five years -- in some cases ten years -- of service. Such retirement pay is much smaller for those retiring early than for those with full careers. Allowing people to earn the right to deferred retirement income with less than a full career alleviates problems associated with separation of those unwanted or unneeded. Similar arrangements would benefit the military.

Those leaving before completing twenty years service lose their military retirement benefits and are not permitted to fully transfer retirement credits to other federal retirement programs. Today, military time is counted toward civil service retirement and used initially in calculating retired pay. Because of a quirk in the law, all military time does not count in the calculation of civil service retired pay received after age 62. At that age, the civil service retiree loses all civil service retirement credit for time spent in the military after 1956, and gets instead a social security annuity for those years. During his time in civil service he does not come under the social security program. Therefore, he is generally entitled only to minimum social security payments based on contributions he made earlier while in the military. The effect is that federal employees with prior military service receive a lower retired pay after age 62 than they received from age 55 to 62. This anomaly should be corrected.

On the other hand, civil servants in the military reserve should not get double retirement credit for military service. Under present rules, a reservist's active duty time is credited toward civil service retirement. It also counts toward eligibility for military retired pay at age 60. Thus, years of active duty are counted twice -- once for civil service retirement and once for a military retirement. This loophole should be eliminated.

In examining problems of retired pay, the deteriorated financial condition of retirement programs in government and in business becomes obvious. Several months ago, the New York Times reported that 55 Federal Government retirement funds have a projected deficit totaling $350 billion dollars. The Navy Times recently reported that the military retirement program deficit constitutes between $160 billion and $200 billion. The Washington Post reported in 1977 that America's 100 largest industrial corporations have promised their employees $38 billion more in pensions than the companies have put aside to meet these requirements.

The unfunded liabilities of the military retirement system are so large because the Defense Department has no military retirement fund from which to meet its obligations. Instead, it includes in its annual budget only enough to cover retirement to be issued that year. When the press states that military retirement costs have increased tenfold since 1964, and are approaching 10 percent of the entire defense budget, these figures represent but a fraction of the full cost of military retirement.

Another reason for the large unfunded liability in the military retirement system is that it is non-contributory. The Civil Service retirement system and the retirement plans offered by most state and local governments and by private industry generally require employees to contribute from 3 to 8 percent of salary to the retirement fund. The employer also contributes to the fund. Under the military retirement system, the Government alone funds the retirement program. There are no deductions from military pay for this purpose. Without employee contributions, the unfunded liability of the retirement system is much larger than it would otherwise be.

For the short range, Government agencies have a strong incentive to fulfill their needs in ways that have minimum impact on current budgets. Thus, the promise of liberal retirement benefits can be used immediately for recruiting purposes. But the full cost of these benefits is not included in the Defense budget where it would have to

compete with weapons programs for available funds. The result is that neither Congress nor the public sees the cost of these hidden benefits until later years when it is too late to do anything about it. We now begin to see the effects. Unless prompt action is taken to set aside funds to meet future retired pay commitments, future Congresses will be faced with the funding of overwhelming retirement commitments.

The finances of the Civil Service Retirement Program are handled differently than those of the military retirement system. Under the Civil Service System, each Government agency budgets funds to match employee retirement contributions. Also, Congress is supposed to appropriate funds sufficient to cover increases or new laws which change retirement benefits. To date, however, the Government has not been budgeting for, or making, full payments to the Civil Service Retirement and Disability Fund. Similarly, the federal budget does not reflect the current value of the expected increase in liabilities resulting from inflation. As a result, according to Civil Service Commission figures, the unfunded liability of the Civil Service Retirement and Disability Fund -- the largest of the federal civilian retirement systems, has increased from $53 billion in fiscal 1970 to $150 billion in 1976.

The main purpose of a retirement program should be to take care of those no longer employable. This could be served more effectively and efficiently by consolidating the various retirement plans into a single retirement system for the entire Federal Government, with the retirement credits earned in any part of the federal service fully transferable to any other part. Agencies should not be permitted to compete with each other for personnel by using differences in retirement benefits. Varying conditions of employment, hazards, and so on should be handled directly through salary differentials, lump sum payments, or similar direct means. Such direct payments can be more readily assessed by Congress and the agencies and more properly administered from a financial standpoint. Too often the benefits of various retirement programs have been so obfuscated that even the individual hemself has no appreciation of his true earnings. Given that military retirement payments alone are budgeted at over ten billion dollars for fiscal year 1979, it is clear that action must be taken to fully reflect all retirement costs in the budget and to place all retirement programs on sound financial footing.

The high cost of our military retirement system combined with its ineffectiveness, inefficiencies and inequities, dictate the need to start phasing out the present system and replacing it over the next several years. Ultimately, military retirement should be included in a single Federal retirement program for all employees of the Federal Government. My specific recommendations are as follows:

1. A thirty year military career should be required - except for those disabled or otherwise not meeting the needs of the service. This will improve readiness and necessitate less initial training.

2. To improve personnel management flexibility, those with five or more years service who are passed over or selected out prior to completing thirty years should be entitled to retired pay starting at age 62 with less than twenty years service, or at age 60 with more than twenty years. Such retired pay should be based on number of years served. A lump sum payment would be proper in such cases to ease transition to private life. Those who continued to meet military requirements and needs would serve the full thirty years or until age 55 before being eligible to receive retired pay.

3. The military retirement system should be contributory so that actual personnel costs are fully visible to the individual, the Executive Branch, and the Congress.

4. A schedule should be established for creating and fully funding a military retirement fund so that future generations will not be saddled with today's retirement commitments. Budgeting on the basis of meeting only the current year's "pay out" requirements should be prohibited. I understand that the Department of Defense may so recommend in the near future.

5. The military should be required to budget enough annually to cover retirement pay liability for present and previous servicemen. The cost impact of changes in retirement benefits should be identified in the budget and specifically approved by Congress at the time authorized.

6. The 50-some Government retirement plans should be consolidated into a single system which would include the military and all other Federal employees.

a. Retirement credits among Government retirement systems should be fully interchangeable. Civil servants should not receive double retirement credit for time in the military, as presently is the case for military reservists. Conversely, military time creditable toward civil service retirement should continue to count throughout retirement instead of being eliminated at age 62.

b. All Government retirement systems should defer retired pay until at least age 55. Our citizens should not be encouraged to believe they can expect a salary and retired pay during their working years.

c. All Government retirement systems, not just the Civil Service Retirement System, should provide rights to a deferred retirement income of some amount, with payments starting at age 62, for persons who have served a prescribed minimum time, say 5 years.

d. Consolidation of all Federal Government retirement programs should not be used to further delay reforming military retirement rules.

In revamping the military retirement system, the Government must not break faith with those who have committed themselves to a career with the understanding that certain benefits would accrue. Therefore, changes should provide a phase-in period designed to avoid inequities. Most important, whatever retirement system the Commission on Military Compensation recommends, the system must be fair -- and perceived to be fair -- by military and civilians.

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9. QUESTION: What changes should be made to dual compensation provisions?

ANSWER: In 1977 testimony before the House Committee on Post Office and Civil Service, I stated that further restrictions on dual compensation are required. Dual compensation refers to the practice of drawing a Government salary and Government retired pay simultaneously, usually by retired military personnel in civil service jobs. This practice has increased substantially during the 1970's to the point that today over 140,000 people, comprising five percent of the entire federal civilian work force, are "double-dipping," that is, receiving dual compensation. In addition, there may be as many as ten retired generals and admirals each of whose combined military pension and federal civilian salary exceed the total salary paid the Vice-President or Chief Justice of the Supreme Court, and as many as 25 more who receive more than the members of the President's Cabinet.

From these figures, it is evident that although the most startling cases involve retired flag-rank officers, the problem of double-dipping also involves lower ranking officers and enlisted men. The problem is not simple. Historically, Congress has approached it from various directions.

In 1894 Congress passed a law providing that no person could hold two Federal Government offices if the salary attached to either was $2,500 or more. At that time, Congressmen earned $5,000 and the equivalent of today's top civil servants $2,500. The 1894 law applied only to regular military officers; reserve officers, enlisted regulars, and enlisted reservists were exempt, as were elected officials and those appointed with Senate confirmation. When the law was enacted, it affected only 390 retired officers--lieutenant commanders, majors, and above. These officers were prohibited from holding other jobs in the Federal Government. In 1924 the law was amended to include officers retired for disability in the line of duty.

In 1932 another law was passed, and subsequently amended in 1956, to permit regular officers and certain "temporary" officers retired for "noncombat" disability to hold another Government job providing their combined federal income did not exceed $10,000 annually. No restriction was placed on reserve officers and enlisted.

By 1963, there were over 40 different laws and about 200 separate Comptroller General decisions involving dual compensation. To eliminate the confusion, a Dual Compensation Bill was introduced and referred to the Post Office and Civil Service

Committee. The intent of the original bill was to permit hiring any qualified military person; to simplify conflicting statutes; and to treat all military equally--regular, reserve, officer, or enlisted. As finally passed, however, the Dual Compensation Act of 1964 restricted the pay of regular officers only, not the pay of reservists or enlisted. It liberalized earlier laws by permitting a retired regular officer to draw a full civil service salary and a reduced retired pay consisting of the first $2,000 of his military retired pay, plus half his remaining retired pay in excess of $2,000. This $2,000 figure is subject to cost of living increases; the figure is now about $4,200. In other words, a retired regular officer, employed in the Civil Service, forfeits half his military retired pay in excess of $4,200. There is no reduction of retired pay for reserve officers or retired enlisted personnel in civil service jobs.

The Civil Service Commission has authority to waive the Dual Compensation Act for retired regular officers. Also, because of the apparent shortage of qualified people in 1964 to meet the then urgent needs of the space program, the National Aeronautics and Space Administration (NASA) was provided statutory authority to exempt 30 NASA jobs from the restrictions of the Dual Compensation Act. With the NASA exemptions and the Civil Service Commission waivers, there are now some 42 retired admirals and generals drawing their full military retired pay as well as their full salary as Federal civilian officials. A retired four-star admiral or general with a waiver of the Dual Compensation Act can be employed as a GS-18 and paid $83,000 per year by the Government.

In my opinion, there should be no waivers or NASA exemptions from the Dual Compensation Act. These loopholes benefit only a small group of retired senior officers, generally those who happen to have been in positions of influence prior to retirement. It is difficult to believe that their services, past or present, warrant federal pay greater than a U.S. Senator's salary. It is inconceivable that any retired military officer can be so vital to a Government agency that his job could not be filled with another fully qualified person willing to work for the salary that position commands.

Another form of double-dipping falls outside existing restrictions on dual compensation. This occurs when retired Government personnel--civilian or military--draw retired income from the Government but use their influence with former co-workers to obtain a lucrative salary through Government contracts for consulting services, studies, or other special projects. For example, a Navy officer who has become an expert in some area--entirely at Navy expense--starts drawing retired pay from the Navy after but twenty years of service, and also sells his expertise back to the Navy under a consulting contract or under a study contract with a "think tank."

There are many cases where the Navy contracts for special studies on the basis that the Navy itself does not have sufficient expertise. These contracts go to "think tanks" that assign retired officers to the job as "experts." Thus, we have a curious phenomenon--an officer becomes sufficiently expert to perform Navy work only after leaving the Navy. This is a problem which in equity to the Government warrants attention.

Even when the pay restrictions of the Dual Compensation Act are applied, many retired military people draw combined incomes far in excess of their civilian pay. It is difficult for their civilian counterparts to understand why retired military people should receive a much larger income from the Government when doing the very same job.

The Dual Compensation Act reduces the pay only of retired regular officers. This group constitutes less than 4 percent of the 141,000 retired military working as federal civilians. Over 96 percent of these so-called double-dippers are reserve officers or former enlisted men who, being exempt from the Dual Compensation Act, receive their full civilian pay plus their full military retired pay, with no reductions. Restricting dual compensation is a sound concept as a matter of public policy. The principle should be applied across the board.

In private industry, and elsewhere in Government, employees do not receive full retired pay as well as a full salary from the same employer. If civil servants continue to work for the Government beyond the date at which they are eligible to retire, they can draw no more than the pay prescribed for the position held. However, they continue to earn retirement credits. The same principle applies in most retirement plans used in private industry. It should also apply to retired military personnel who work for the Government.

The United States has no moral commitment or obligation to pay a full civilian salary plus retired pay to military personnel. This is particularly so in the case of new hires. Some exceptions to dual compensation restrictions may be appropriate in the case of retired military currently in the employ of the Government. But as a matter of public policy, no Government agency should have to depend on retired military personnel to staff its organization. Frequently, filling vacancies with persons drawing Government retired pay demoralizes career civil servants who might otherwise have had a chance to fill these positions. Military persons drawing retired pay have the option of seeking employment outside the Government if restrictions on dual compensation are not to their liking.

The main purpose of a retirement program should be to take care of those no longer able to work. As such, I have several recommendations for strengthening the Dual Compensation Act. Specifically:

1. Waivers of the Dual Compensation Act should be prohibited. There is no valid justification for the Government to pay some retired military officers combined civil service salary and military retired pay greater than the salaries paid to the Chief Justice of the Supreme Court, the Vice President, and Members of Congress.

2. Dual Compensation restrictions should apply to all retired military personnel--regulars, reservists, officers, enlisted. There is no valid reason to discriminate against regular officers in applying dual compensation restrictions.

3. Retired military personnel subsequently employed under civil service should be compensated in the same manner as civil service employees who continue to work for the Government after being eligible for retirement. Namely, they should continue to earn retirement credits, but should not be paid in total more than the approved civil service salary for the job.

Implementing the recommendations I have made would result in substantial progress toward restoring the American people's confidence in Federal military and civilian retirement programs.

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

21 June 1978

MEMORANDUM FOR THE SECRETARY OF DEFENSE
Via: The Secretary of the Navy

Subj: Contractor Independent Research and Development (IR&D)

Ref:
(a) My memorandum to the Assistant Secretary of the Navy (Research and Development) dtd 30 Apr 1977
(b) Memorandum from the Assistant Secretary of the Navy (Research, Engineering, and Systems) to me dtd 15 Aug 1977
(c) NAVSEA memorandum for Chief of Naval Research dtd 18 Aug 1977
(d) Chief of Naval Research ltr dtd 16 Sep 1977
(e) NAVSEA ltr 03C/JHH Ser 3 dtd 19 Jan 1977 with enclosures

1. The purpose of this memorandum is to request your assistance in trying to eliminate the present system of Independent Research and Development (IR&D) payments. I am writing to you directly because this is a persistent problem which lower level Navy officials have been unable or unwilling to solve. The paragraphs which follow explain why I believe the IR&D system is wasteful, poorly managed and should be abolished.

2. As I have explained in testimony before Congressional committees and elsewhere, the following deficiencies exist in the present IR&D system:

- Virtually any research undertaken by a contractor can be construed as "independent research and development."
- The Government has no authority to select, direct or supervise IR&D work.
- The contractor, not the Government, gets the patent rights to technical data and inventions developed with IR&D funds.
- Government officials are lax in enforcing the few existing controls on allowable IR&D costs.

- Many defense contractors are insulated from competitive pressures and thus have no incentive to hold down IR&D costs.

- IR&D funds can end up as a Government subsidy of largely commercial ventures.

3. IR&D expenditures have increased at a rapid pace. For example, in 1968 the Defense Department reported that it spent about $600 million for Independent Research and Development (IR&D) and for Bid and Proposal (B&P) expenses. This amounted to 2.7% of defense procurements. In 1977, the corresponding amount was $1 billion, about 3.4% of defense procurements. These reported expenditures are significantly understated because only about 100 of the largest defense contractors are included in Defense Department figures. The actual amount spent by the Defense Department in 1977 was probably well over $1 billion. Judging from past experience, expenditures may soon total about $2 billion annually.

4. The question is, what benefit does the Government get for its investment in IR&D? After a lengthy study, the General Accounting Office reported in 1975 that it could not determine whether the benefits of IR&D are worth the cost. I doubt that ordinary citizens would, year after year, blindly invest in projects which have no measurable results. Why should the Government do so?

5. In reference (a), I recommended to the Assistant Secretary of the Navy (Research and Development) that he work to stop this wasteful expenditure of scarce public funds. Reference (b) is his reply. The gist of reference (b) appears to be that current IR&D policy is sound because it is based on

> "...the need of assuring an environment for innovative concepts..., to develop increased technical competence in industry for wider competitive responses and contributing to the economic stability of defense industry by broadening their technology base...."

6. Actually the defense industry is dominated by a few powerful contractors who receive the lion's share of IR&D payments. These firms can use their large IR&D programs to sharpen their competitive advantage over smaller firms in the pursuit of defense business. In this manner, smaller firms are discouraged from bidding on defense work. Accordingly, I do not believe that current IR&D policy promotes innovation, competition, or economic stability among defense contractors. In fact, just the opposite appears true.

7. A few examples illustrate why I believe the Government does not get its money's worth for IR&D expenditures. One case is the Electric Boat Division of General Dynamics, where virtually all work involves submarine construction. For the past several years, the Naval Sea Systems Command--which has direct responsibility for shipbuilding within the Defense Department--has conducted a technical review of Electric Boat's IR&D program. NAVSEA concluded the program does not warrant Government funding. Yet NAVSEA's evaluations have been repeatedly overruled by the Office of Naval Research, which coordinates IR&D technical evaluations within the Navy, and by the Air Force, which represents the Government in IR&D negotiations with all divisions of General Dynamics. The IR&D ceilings negotiated for Electric Boat's programs by the Air Force have risen from $700,000 in 1975 to about $900,000 in 1976 and 1977.

8. In reference (c), the Commander, Naval Sea Systems Command requested the Chief of Naval Research to ensure that future IR&D negotiations at Electric Boat be based on the technical evaluations performed by NAVSEA. In reference (d) the Chief of Naval Research replied that to be "meaningful," the NAVSEA technical evaluations of IR&D proposals, which are presently written in standard English, should be reduced to numerical ratings and tabulated on DD Form 1855. This form is used to "score" a contractor's IR&D proposal.

9. Unfortunately, the graded areas do not include a determination of a project's value to the Government. Also, the scores are weighted as a function of "evaluator qualifications;" however, the scorer grades himself in this area. Often, evaluators have no expertise in, or responsibility for, the proposed work. For example, the Office of Naval Research invited the "Army Tank Automotive R&D Command" to evaluate Electric Boat's 1978 IR&D proposal.

10. The Government's processing of Electric Boat's 1978 IR&D proposal reveals the futility of the present system:

- In May 1978 the company submitted its final proposal for $803,500. The Air Force has already set a $900,000 limit--$100,000 more than requested.

- The Naval Sea Systems Command expects to complete its technical evaluation of the proposal shortly; a review by various Defense Department organizations is scheduled for later this year.

Under the circumstances it is highly unlikely that the technical evaluations will have any significant impact on the amounts finally negotiated.

11. A similar situation pertains at Ingalls Shipbuilding Division, Litton Systems, Incorporated. Reference (e) informed the Office of Naval Research that Ingalls' IR&D proposal for 1977 was not worth the Government's investment. The Naval Material Command subsequently agreed to give Ingalls a combined IR&D/B&P ceiling of $860,000.

12. I understand that Ingalls' IR&D proposal for 1978 has just been negotiated by the Naval Material Command and that the company was allowed almost all of the amount it requested. One proposed project involves a study of the possible use of sails and windpower for Naval ship propulsion. The Naval Sea Systems Command has stated that Ingalls' 1978 proposed work is of no value whatever to the Navy. However, the Office of Naval Research has reported this "severe opinion" was not shared by other reviewers of the Ingalls proposal.

13. I do not mean to single out Electric Boat or Ingalls for criticism. The problem is with the IR&D system as a whole and those who administer it. Turning over large sums of money to defense contractors to spend as they see fit and without close supervision is neither an economical nor sensible way to accomplish any work, let alone research and development.

14. The Defense Department is chronically short of funds to contract directly for defense related research and development. Why should it waste billions on an IR&D system which features runaway costs, no accountability, and dubious benefits to the Government?

15. President Carter has urged Government agencies to curb unnecessary spending and to promote more efficiency in Government. I know that you support him in these efforts. IR&D offers a good opportunity to cut back federal spending in the Defense Department without impinging on our military capability.

16. Based on the above, I recommend that you take whatever action is necessary to abolish the present IR&D system. In the meantime, I also recommend that you:

- Instruct IR&D negotiators to be guided by the technical evaluations of proposed IR&D work.
- Permit only persons who have expertise in the proposed work to evaluate it.

- Instruct responsible defense personnel to reject IR&D programs where the benefits to the Government do not warrant the costs.

- Arrange to finance worthy research and development by direct contract, so that the Government can supervise the work and retain appropriate rights to resulting technical data, inventions, and patents.

17. I would appreciate being informed of the action you take in this matter.

H.G. Rickover

Copy to:
Under Secretary of the Navy
Assistant Secretary of the Navy
(Research, Engineering and Systems)
Chief of Naval Material
Chief of Naval Research
Commander, Naval Sea Systems Command

THE UNDER SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

RESEARCH AND
ENGINEERING

24 NOV 1978

MEMORANDUM FOR THE DEPUTY COMMANDER FOR NUCLEAR POWER (NAVSEA)

SUBJECT: Contractor Independent Research and Development (IR&D)

Within the past few days your memorandum of 21 June 1978 was forwarded to this office. We regret that our reply has therefore been so delayed.

We have read your memorandum with great interest and, of course, we are already aware of your views on IR&D. We appreciate your comments and will certainly consider them in any future revisions to the Department of Defense policy on IR&D. However, we basically disagree with your assessment of deficiencies and believe the present system is fundamentally sound. This is not to say that improvements cannot be made, and we expect to make adjustments to the policy as they are needed.

Your continuing interest in the IR&D policy is appreciated, and your comments will be given careful consideration. We welcome any input you may have regarding IR&D problem areas and your recommendations for their resolution.

William J. Perry

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
18 Oct. 1978

Honorable Joseph G. Minish
House of Representatives
Room 2162
Rayburn House Office Building
Washington, D.C. 20515

Dear Mr. Minish:

I read yesterday that for Fiscal Year 1978 the Renegotiation Board announced excess profit determinations of $34 million--nearly six times the Board's annual operating cost--after reviewing only a small portion of the Board's $150 billion backlog. This confirms what you have been telling your colleagues in Congress--that there are vast sums to be saved for American taxpayers through effective renegotiation.

In this regard, the taxpayers owe you a debt of gratitude for your tireless efforts to recover excessive profits on defense contracts. I doubt that even your own constitutents have any appreciation of the long hours you have devoted in this area, not only for them, but for all Americans. Nor would they be able to conceive of the pressures that the large and powerful defense contractor lobbyists have brought to bear to thwart your efforts as the House's foremost proponent of renegotiation. Despite these pressures, you have never wavered from your determination to serve our citizens and taxpayers.

I want you to know that in all my years of dealing with members of Congress, I have found you completely dedicated to the public good--a public servant in the finest sense of the word. By standing firm on principle; by relentiessly pursuing your objective against overwhelming odds; and by knowing your subject, you are a model legislator.

It is an honor to know and to work with you. And, in your continuing efforts, remember the words of the Italians of old, "Illegitimati non carborundum."

Respectfully,

H. G. Rickover

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
18 April 1979

MEMORANDUM FOR THE DEPUTY SECRETARY OF DEFENSE

Subj: Government Participation in Privately Sponsored Seminars

1. Attached is a brochure announcing a two-day seminar to be held in the Washington area in June and in the Boston area in July on the Federal "Source Evaluation and Selection Process". This seminar is sponsored by an organization called "The Technical Marketing Society of America" and is managed by another group called "State of the Art Seminars". Fees to attend the seminar range from $195 to $325.

2. The stated purpose of the seminar is to promote an understanding of the Federal Source Selection Process. The attached brochure portrays this process as, among other things, "complicated, cumbersome, often confusing, and sometimes contradictory". The brochure also states that there is insufficient information concerning the process. The seminar will feature a "guest expert" who apparently will conduct the entire seminar. This individual is an Air Force Contracting Officer who purportedly has extensive Government procurement background.

3. In my opinion the Government should not participate in the sort of seminar promoted by the attached brochure nor should the Government send its people to them. If the Government needs to disseminate more information concerning the Federal Source Selection Process, there are surely more efficient, thrifty, and comprehensive means than the proposed seminar. It is not clear why federal employees should be charged $195 each by private organizations simply to hear one of their own co-workers describe his area of expertise. It seems to me that this exchange of information could be accomplished more cheaply in Government facilities, under Government auspices. Likewise, as a result of the proposed seminar, the Government will lose the services of the speaker for a minimum of four days--probably much more when preparation and travel time are considered. I question the propriety of this allocation of public resources, particularly if the principal beneficiaries are the sponsoring organization and the

conference managers, who at least will receive valuable publicity, and perhaps much more. Moreover, the fact that a Government employee is participating in the seminar gives it an aura of official sanction which likely encourages the attendance of Government people and which may be interpreted as Government endorsement of whatever views are expressed in the seminar.

4. If training federal employees in specialized areas is needed, this should be accomplished by Government-sponsored meetings and seminars. Likewise, if the Government needs to open these meetings or seminars to private parties, it could do so on a selected basis--all at considerably less cost than indicated by the fee schedule cited in the attached brochure.

5. In my opinion, conferences sponsored by private organizations and featuring high attendance fees and Government participants are all too common. I also believe that such arrangements are not proper. Therefore I recommend that you take steps to elimate Department of Defense participation in seminars of the type described in the attached and that you recommend that similar steps be taken throughout the Federal Government.

Encl

H. G. Rickover

Copy to:
The Secretary of the Navy
Chief of Naval Operations
Chief of Naval Material
Commander, Naval Sea Systems Command

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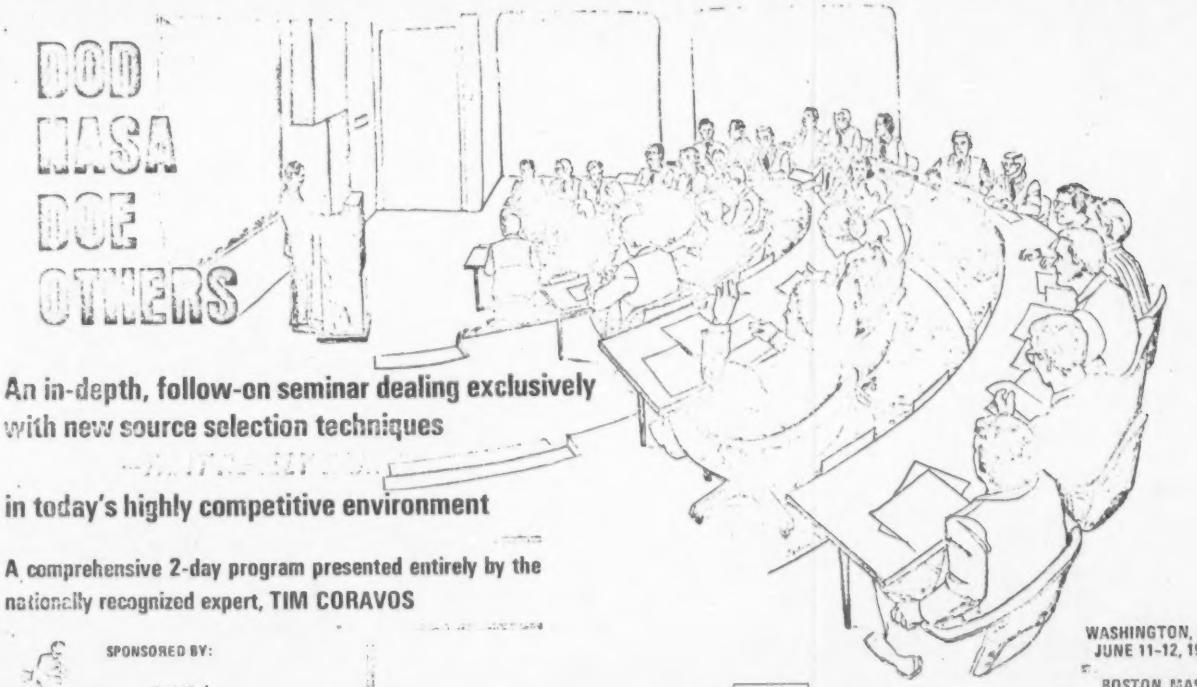

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ABOUT THE GUEST EXPERT

TIM CORAVOS has many years experience in the specific fields of RFP Preparation, Source Evaluation, and Source Selection. He is currently a Contracting Officer for the Air Force's Electronic Systems Division (ESD), Directorate of Systems Contracts. In this capacity, he has procurement responsibility for large, complex, competitive systems acquistions. He develops early acquisition planning strategy, prepares RFP's, including specific evaluation criteria, and serves as Chief of the Contract Definitization Team of the Source Selection Evaluation Board (SSEB). He assists in the initial evaluation of proposals and is responsible for the post proposal submittal evaluation phase including Questions/Deficiencies/Answers/Orals. He is heavily involved in writing the final SSEB evaluation reports to the Source Selection Advisory Council (SSAC) and Source Selection Authority (SSA), and chairs any subsequent debriefings to unsuccessful bidders.

Prior to his present position, he served as ESD's Source Selection Officer and Chief of the ESD Source Selection Secretariat. He was responsible for providing technical support to all ESD source selections. Specifically, he was an advisor to all SSEB's, SSAC's, and SSA's. In addition to actively participating in several ESD source selections, he was also an instructor to new source selection groups and was a co-author of ESD's Supplement to AFR 70-15 (the official Air Force Source Selection Guide). And, he has first hand knowledge of the source selection policies, procedures and techniques used by other Government agencies and departments. Mr. Coravos has a B.S. Degree in Business Administration (Marketing Major) and a Masters in Business Administration (Government Procurement Concentration).

His credentials are impeccable; his style of presentation is direct, candid, and fully competent. Personnel from both the Government and Contractor community will benefit greatly from his presentation. If you have a need to really understand the source selection process, you cannot afford to miss this seminar.

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This program was not designed solely for procurement experts, but was also designed for the wide variety of personnel who are actually affected by the source selection process. The expert will find much new material by which to grow. But, just as important, all seminar attendees, regardless of background, will come away with a complete understanding of how the source selection process really works.

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  - Source Selection Advisory Council (SSAC)
  - Source Selection Authority (SSA)
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- Major Source Selection Events – Time Phasing

Part 2 HANDLING THE NEW FOUR-STEP PROCESS

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- The Common Cut-Off
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  - What Every Offeror Should Know About BAFO
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Part 7 THE DECISION

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C-55/6

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

20 April 1979

The Honorable Ronald M. Mottl
U.S. House of Representatives
Washington, D.C. 20515

Dear Mr. Mottl:

On 12 September 1977 I testified before the House Subcommittee on Elementary, Secondary, and Vocational Education in support of your bill to develop National Scholastic Standards and tests.

As finally enacted, the bill authorized federal assistance in developing testing programs in basic skills and grants to State or local educational agencies that wish to establish basic scholastic standards.

In our recent conversation you said that you would be testifying to the House Appropriations Committee in support of this provision and asked for my views. As you know, many States and localities agree with the need for scholastic standards and tests in reading, writing, and mathematics and are taking steps to establish and implement such standards and tests. However, this can be a difficult and expensive task which many localities may not be able to afford. In this regard, the Federal Government could be of assistance. Specifically:

1. The Federal Government has access to more expertise than any single individual, State, or locality.

2. Developing standards and tests at the national level would help eliminate unnecessary duplication of effort among the many States and school districts attempting to design their own standards and tests.

3. National standards and tests would provide another basis for States and localities to evaluate the standards and tests they have already adopted.

I would like to emphasize that standards and tests developed by the Federal Government should be strictly voluntary, to be used or not as States and localities desire. This effort should not be expensive and would not usurp the States' control over their own educational system.

I would confine the federal involvement to providing technical assistance in the form of actual standards and tests. I do not believe that the Federal Government should provide grants for this purpose to State and local school districts.

I appreciate the opportunity to comment on this issue. I wish you success in your efforts to upgrade the quality of education in this country.

Best regards

Respectfully,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
2 May 1979

MEMORANDUM FOR THE DIRECTOR, OFFICE OF FEDERAL PROCUREMENT POLICY

Subj: "A Uniform Profit Policy for Government Acquisition"; recommendations concerning

Ref: (a) Federal Register Vol. 44, No. 45, dtd 6 March 1979
(b) GAO Report "Recent Changes in the Defense Department's Profit Policy--Intended Results Not Achieved" (OSD Case #5043)

1. Reference (a) requested comments on a potential policy for determining negotiation objectives for profits on Government contracts. The proposed policy would restructure the factors used in setting prenegotiation profit objectives and would base much of the profit for manufacturing and construction contractors on capital employed rather than solely on cost of performance. The proposed policy is directed toward providing an incentive for contractors to invest in more efficient facilities and thereby reduce federal acquisition costs. This memorandum provides my comments and recommendations on the proposed profit policy.

2. The proposed procedure would, for construction and manufacturing contractors, base approximately seventy percent of the prenegotiation profit objective on capital employed and thirty percent on costs. The effect would be to pay higher profits to contractors with large investments in Government work and lower profits to contractors with smaller investments. In this way, the proposed procedure is intended to reward those who invest in labor saving equipment, and at the same time deemphasize the importance of estimated cost as a consideration in determining profit objectives.

3. I have long advocated that greater consideration should be given to contractor investment in evaluating negotiated profits. However, in my opinion, new procedures for computing profit objectives as a percentage of facilities investment will not result in additional contractor investment or reduced costs to the Government. Considerations other than Government profit criteria such as cash flow, taxes,

future business prospects and equipment and facilities obsolesence determine when a contractor invests in new facilities. As long as existing facilities are adequate to do the job, it is rarely to a company's advantage to invest in new facilities before they are needed.

4. Experience has shown that changing the procedures for determining negotiated profit objectives inevitably results in the Government paying higher profits without any measurable improvement in facilities or performance. For example:

a. In 1964 the Defense Department adopted a weighted guidelines procedure for computing negotiated profits. Although the DOD sponsors contended that the intent of the change was not to raise profits, the GAO found that DOD profit rates increased, on the average, two percentage points as a result of the new system.

b. In 1976 the Defense Department again revised its profit procedures in an attempt to encourage contractors to invest in cost reducing facilities. The revised procedures included (1) consideration of the amount of facilities investments in establishing profit objectives and (2) allowability of the imputed cost of facilities capital. DOD again intended to hold the overall average of profit rates at about the same level. Yet reference (b) reported that negotiated profit rates on DOD contracts have increased an average of 7.8 percent, expressed as a percentage of prior rates, since the implementation of the revised procedures. Of the 66 respondents to a General Accounting Office questionnaire, none had invested in facilities as a direct result of the revised Defense Department profit procedures.

5. Because of the noncompetitive nature of much of Government contracting, the Government is in a poor position to implement changes in profit policy which do not have industry support. Contractors who can justify higher profits based on the proposed procedure will demand them; those who cannot will insist on at least maintaining present profit levels.

6. The assignment of greater weight to capital employed in determining negotiation objectives may provide some incentive for contractors to invest. It may also, however, provide the contractor with an increased incentive to raise his profit by manipulating data concerning his investments. Contracting Officers are generally at a disadvantage as compared to industry when negotiations involve

complicated accounting issues and disputes between Government auditors and contractors. Implementation of the proposed procedures could make this situation worse.

7. With regard to current methods of establishing negotiation profit objectives, my experience has been limited to the weighted guidelines procedures used by the Defense Department and Department of Energy. I do not contend that these methods are the most effective in encouraging contractor efficiency or investment. Nor do I deny that return on investment is generally a better indicator than return on costs in judging the profitability of a contract. I believe however, that although the proposed procedures may offer theoretical advantages, in actual practice they will expose the Government to increased costs without accomplishing the purpose intended.

8. I recommend the following:

a. Require that contractors and major subcontractors report actual profits on a return-on-investment basis. The Government should maintain these data in a central file for use by Contracting Officers.

b. Rather than apply new procedures for establishing negotiated profit objectives, Government agencies should continue to use existing methods. Profit objectives calculated by these methods should then be compared with return on investment data and adjusted upward or downward to establish a reasonable profit level in terms of return on investment. Contracting Officers should be required to evaluate and justify the prenegotiation profit objective in relation to historical return on investment data for that type of work from the central file and from published indsutry data for comparable non-Government work.

9. I appreciate the opportunity to comment on the proposed policy.

H. G. Rickover

H. G. Rickover

Copy to:
Secretary of Defense
Secretary of the Navy
Chief of Naval Material
Commander, Naval Sea Systems Command

Secretary of Energy
Under Secretary of Energy
Assistant Secretary for Energy Technology, DOE
Director, Procurements & Contracts Management Directorate, DOE
Program Director for Nuclear Energy Programs, DOE

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
08H-617
3 August 1979

Elmer B. Staats
Chairman
Cost Accounting Standards Board
441 G. Street, N.W.
Washington, D.C. 20548

Dear Mr. Staats,

In the May 25, 1979, issue of the Federal Register, the Cost Accounting Standards Board published for comment a revised proposed standard to promote uniformity and consistency in the accumulation and allocation of independent research and development (IR&D) and bid and proposal (B&P) costs.

Last November 15, I commented on an earlier draft of this proposed standard, originally published in the Federal Register July 28, 1978 (a copy of my letter is attached). My letter discussed problems in the administration of the Defense Department's IR&D program and indicated the new standard should "...take into account some of the abuses observed in the past and be devised so as to minimize the chances for abuse in the future." I recommended that all IR&D costs be pooled at the home office level and then allocated in a consistent and uniform manner over the entire business. This policy would serve as a deterrent to contractors undertaking frivolous IR&D projects or projects of questionable military relevance in divisions where costs would otherwise be borne primarily by the Government. I also agreed with the Board that IR&D should be costed in the year incurred.

The above comments, as well as other comments in my letter, have not been incorporated into the proposed standard. In fact, the proposed standard as revised emphasizes the allocation of home office and segment IR&D expense to business units on a beneficial or causal relationship instead of requiring that all IR&D costs be pooled at the home office level and then allocated across the business as I recommended. This sets up a situation which would enable contractors to pick and choose among allocation bases to maximize the allocation of IR&D to Government contracts. Similarly, the proposed criteria applicable to the deferral of IR&D and B&P costs could be used to charge deferred costs in periods when allocation to Government contracts can be maximized.

I strongly recommend that the proposed standard be revised to incorporate the comments in my letter of November 15, 1978. With funding for many important defense programs reduced because of stringent budgets, it is imperative that Government contracts not be burdened with an inordinate share of contractors independent research costs.

I would appreciate being advised of the action being taken with regard to the above comments.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
15 Nov. 1978

Elmer B. Staats
Chairman
Cost Accounting Standards Board
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Staats:

In the July 28, 1978 issue of the Federal Register, the Cost Accounting Standards Board published for public comment a proposed standard to promote uniformity and consistency in the accumulation and allocation of independent research and development and bid and proposal costs (IR&D and B&P).

Attached is my November 1, 1974, letter to you regarding problems in the administration of the Defense Department's IR&D program. Under this program, the Defense Department spends nearly $1 billion annually for contractor-initiated IR&D. Yet, the Defense Department exercises, in my opinion, no control or direction over how these funds are spent, even in cases where the Government finances virtually all the work. Moreover, the contractors retain exclusive rights to technical data and inventions developed under this program.

I have testified to Congress that the Defense Department should allow costs of IR&D projects only when such costs are specifically provided by contract and then only to the extent such work benefits the contract work itself. In cases where contractor proposed research and development projects have sufficient benefit to warrant the cost, the Defense Department should finance the work by direct contract, rather than through IR&D. Responsible Government officials would supervise the work, as they are supposed to for all work the Government undertakes. I still believe this recommended approach to research and development would best serve the interests of our Government, and that the present IR&D system should be abolished.

I recognize that the Cost Accounting Standards Board has stayed away from issuing opinions on whether IR&D or other costs are allowable. Instead, the Board promulgates standards for measuring and allocating costs. It is in this vein that the Board developed the proposed standard on IR&D and B&P. Since the Defense Department has shown no signs of abolishing the present IR&D program, and since the program is subject to abuse, it is important that

the standards promulgated by the Board take into account some of the abuses observed in the past and be devised so as to minimize the chances for abuse in the future. This can, in my opinion, be accomplished consistent with your objective of sound accounting. It is with this in mind that I offer the following comments on your proposed standard.

The proposed standard should distinguish between IR&D and B&P to permit separate and distinct allocation of IR&D costs from B&P costs. The Board historically has maintained a policy of accumulating costs within each business division (segment) and then allocating those costs downward across the total business activity of that particular division or any remaining lower level divisions. The proposed standard requires this longstanding treatment for B&P costs with which I agree. It is easy to distinguish the divisions which derive benefit from B&P costs. It is difficult to conceive that the work resulting from B&P costs of one division has a direct benefit to other divisions at the same level or higher within the business organization.

On the other hand, proponents of IR&D contend that all business divisions benefit from this effort. In the Defense Department IR&D program, the Defense Department concluded that research on commercial toasters had a potential military relevance. Since many contractors claim that the military benefits from their far flung IR&D projects, it follows that commercial divisions must similarly benefit from IR&D performed at divisions dedicated primarily to military work. Suppose a contractor chooses to overload with IR&D a division which, for the most part, is defense oriented and where the constraints of competition are either weak or do not exist. The Defense Department has no way of knowing whether the benefits derived by the contractor from the IR&D serve to enhance the contractor's defense business or the contractor's commercial business, yet the Defense Department ends up paying the major portion of the cost of such work.

Since many defense contractors also compete in commercial markets where competition is likely to be greater than it is in the defense industry, a requirement that IR&D costs incurred by divisions be pooled at the corporate headquarters and then allocated to all divisions, both defense and commercial, might serve as a deterrent to contractors undertaking frivolous IR&D projects in divisions where the entire costs would otherwise be borne primarily by the Government. Therefore, I recommend that the proposed standard be revised to require that all IR&D costs be pooled at the corporate headquarters and allocated in a consistent and uniform manner over the entire business.

The proposed standard should be expanded to include treatment of B&P costs for existing contracts as distinguished from B&P costs for potential contracts. There is a rationale for treating B&P costs for changes to existing contracts differently than B&P costs for new procurement. Navy shipbuilding contracts, for example, provide for an equitable increase in the price of

existing contracts to cover effort incurred by the contractor in preparing bids and proposals for changes requested by the Navy. The proposed standard should permit, as a direct change to the contract, B&P costs incurred as a result of amendments, modifications, or changes to existing contracts, provided this treatment is consistently applied to all contracts, both Government and commercial.

I agree with the Board that IR&D should be costed in the year incurred. If IR&D is considered to be a cost of doing business, it should be treated as such. This requirement that IR&D be costed in the year incurred provides a consistent basis for all contractors. If contractors are permitted to pick and choose among IR&D projects and set their own standards for when these costs are to be allocated, many will no doubt make these decisions on a basis which will result in maximum allocation to Government contracts. Further, the Financial Accounting Standards Board's Statement No. 2 dated October, 1974, made it clear that for financial accounting purposes that IR&D should be treated as an expense of the current year and not deferred. It is only proper that the Cost Accounting Standards Board treat IR&D as costs of the current year. Therefore, I recommend that the proposed standard <u>not</u> be changed to allow deferral of IR&D costs to later years.

The proposed standard should be revised to require the allocation of contractors' general and administrative (G&A) expenses to IR&D and B&P projects. When the Government or another contractor places a research and development contract directly, that contract is allocated its appropriate share of G&A expenses. G&A expenses incurred as a result of an IR&D or a B&P project are real costs, and should be identified as real costs of that project. The annual reports to Congress on total expenditures of IR&D and B&P costs for major defense contractors will reflect more realistic figures if these costs are allocated their fair share of G&A expenses.

I would appreciate being advised of what action you decide to take with regard to my comments.

Sincerely,

H. G. Rickover

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

NOV 1 1974

Honorable Elmer B. Staats
Comptroller General of the United States
General Accounting Office
Washington, D. C. 20548

Dear Mr. Staats:

In a letter dated September 27, 1974, Mr. R. W. Gutmann of your staff requested my comments on alternative approaches to the treatment by the Defense Department of contractor independent research and development costs (IR&D). The fourteen alternative approaches ranged from removal of all Defense Department controls over IR&D, to strict control of these costs through grants or contracts. I am responding directly to you because I believe IR&D is an important subject meriting your personal attention.

First, I want to comment on some of the underlying assumptions about IR&D and defense procurement that these approaches appear to make and with which I disagree. For example, there seems to be an assumption that without IR&D, weapons development will be adversely affected. Certainly, some technological developments in weaponry may have flowed from work funded under IR&D. But since World War II, the great majority of weapons technology has flowed from Government-directed defense work. During this period, most defense research and development has been funded directly by the Government through in-house laboratories and through contracts and grants to private industry and educational institutions. In over 50 years of naval experience, I have not found direct funding of research and development to be stifling to technological or scientific creativity. Thus, a change in the treatment of IR&D, in my opinion, would not hamper the development of weapons technology.

There also appears to be an inherent assumption that the Government has an obligation to subsidize contractors' independent research and development programs. For example, one disadvantage listed for a direct grant system of funding IR&D is that "contractors could be reluctant to use their own funds for research if they are not sure of getting grant funds for further work." (underlining mine). The question inevitably arises that if the research is not sufficiently attractive to be funded either by the contractor, or directly by the Government, why should the Government pay for it indirectly?

Much of the debate over IR&D within the defense community is being conducted with a basic misconception about defense procurement. There is a continuous search for the correct management formula or the ideal organizational structure under which defense procurement dollars automatically will be well

spent without having to resort to Government surveillance. Unfortunately, my experience has been that research and development and procurement do not lend themselves to simple, automatic policies. I find, for example, when dealing in these areas that research is not easily differentiated from development; some work can legitimately be classified in either category. Proper administration of research and development comes not from more precise definitions of these terms, but from better knowledge and closer technical control of the projects being undertaken.

Independent research and development and bid and proposal costs (B&P) are often interchangeable. Companies may treat certain costs as either IR&D or B&P for accounting purposes. This principle is even recognized in the Armed Services Procurement Regulation which permits companies to recover costs for B&P over the negotiated ceiling as long as the ceiling on IR&D costs is reduced by a like amount, and vice versa.

There is essentially no competition in most defense procurement. The only truly competitive procurements are formally advertised procurements, and they represent typically about eleven percent of prime contract dollars per year. On the other hand, over half of all defense procurement is placed under sole source or follow-on, non-competitive conditions. In this atmosphere, there is little real incentive for defense contractors to cut costs, and to manage closely such overhead programs as IR&D. On the contrary, current Defense Department profit policies reward high costs with high profits, and provide a positive incentive for inefficiency and lax management.

Finally, fixed price type contracts do not ensure low prices; nor do they protect the Government's interests sufficiently to make Defense Department controls over IR&D unnecessary. Fixed price contracts and subcontracts awarded under non-competitive conditions do limit to some extent the Government's exposure to cost overruns. But they give a contractor little incentive to submit the lowest reasonable bid price. Thus, fixed priced contracts are not a substitute for effective competition. In fact, as I am sure you are aware, there is no magical mix of contract types that can substitute for real competition or, in the absence of such competition, for Government surveillance of contractor operations.

What disturbs me the most is that the GAO proposals, like much of the current debate, tend to consider IR&D only from the contractors' point of view. Little if any attention is being given to IR&D as it affects the user--the Defense Department. Yet, these are important considerations, particularly in a period of budget stringency. For example:

The Navy is short of critically needed research and development funds. In fiscal year 1973, the last year for which figures are available, the Defense Department paid $441 million for contractor independent research and development work. In contrast, the total Navy exploratory development budget for fiscal year 1975 is under $300 million. Many important submarine research projects have had to be canceled, deferred, or cut back in such areas as advanced sonars, communications, weapons, navigation, and nuclear propulsion due to a lack of money. Yet contractors are able to pursue their own research and development projects because of the Defense Department's largesse with funds.

While hundreds of millions of defense dollars each year are spent for IR&D, the benefits accruing to the military from this work are uncertain. In my opinion, whatever benefits have accrued from this program in past years have not been worth the cost. Certainly this is true in the areas in which I have direct knowledge.

The Government has little control over IR&D programs. The Defense Department cannot actively supervise or even closely monitor the work; it cannot eliminate unnecessary duplication; and it cannot direct that certain projects be undertaken or performed.

The Government receives neither rights to technical data nor patent rights from work performed under IR&D. On the contrary, if a product or process developed under IR&D is patented by the contractor, the Government may have to pay a royalty for use of the patented item. I encountered one case where a contractor developed an automatic welding machine under an IR&D program, for which 99 percent of the costs were paid by the Defense Department. The welding machine was then marketed to defense suppliers who passed on the royalty costs to the Government in the price of their work In this case, the Government paid for developing the invention and continues to have to pay for the rights to use it.

In addition to these drawbacks to IR&D from the Government's point of view, the present IR&D system is actually anti-competitive. Companies doing defense business are able to develop inventions at Government expense which they may then use in their commercial work. This gives them a competitive advantage over non-defense firms which are not eligible for such a subsidy.

The present system of evaluating contractor independent research and development programs is ineffective. The law requires that the Defense Department make an affirmative determination that the work has a potential military relationship before IR&D costs can be accepted. But under these criteria, almost any research project, no matter how remote, could be shown to have a potential military relationship.

Finally, the reviews of contractor IR&D programs tend to be superficial. IR&D programs, for which the Government pays less than $2 million, are not reviewed technically; they are controlled only by a negotiated ceiling. Programs over $2 million receive technical reviews, but these are often conducted by people with little knowledge of the work. Even in the nuclear propulsion field, I am not routinely asked to evaluate contractor research programs, and as a consequence the Defense Department has funded IR&D projects which duplicated work I was doing, or which were directed toward commercial, not military application.

I believe that we need to recognize the Government's interests and abolish the practice of subsidizing contractor IR&D. I recommend that a system similar to that employed by the Atomic Energy Commission be adopted. Specifically:

1. Treat IR&D costs on a contract by contract basis. IR&D costs would be unallowable except where the contracting agency made an affirmative determination that an IR&D project provided sufficient benefits to the contract to warrant the cost.

2. Allow contractors to submit to the Defense Department any military-related research projects which they want the Government to finance completely. The Defense Department would then contract directly for whichever of these projects it desires to pursue. The funds would be provided as a separate line item in the RDT&E appropriation.

3. Allow B&P costs if the subject matter of the bids and proposals is applicable to defense work. B&P costs for non-defense work would be unallowable. Place a ceiling on the allowable B&P expenses such as one percent of the total direct material and direct labor costs of the contract work.

4. Reserve and protect Government rights to technical data and patents commensurate with the percentage of the research costs borne by the Government, regardless of whether funding of those costs is direct or indirect.

Contractors would undoubtedly dislike this system as it would greatly reduce the Government's funding of their own pet projects. But the question for the Congress must boil down to this: If the ordinary citizen were given up to 500 million dollars a year for research and development work, would he turn that money over to defense contractors to spend as they saw fit in the hope something useful would result? Or would he direct that money toward finding solutions to specific problems standing in the way of better weapons systems? There is no question in my mind but that the Department of Defense would get far more for its money if it were spent on specific defense projects

where responsible officials had to review, approve, justify and defend the expenditures. This system would also permit Congress to review and oversee these expenditures--a possibility which is currently precluded.

I know you take seriously your responsibility to look "to greater economy or efficiency in public expenditures." In my view, the present IR&D system does not provide either economy or efficiency. That is why I recommend greater control over research and development work accomplished with public funds.

I appreciate the opportunity to comment to you on this subject.

Sincerely,

H. G. Rickover

92-784 O - 82 - 11

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
26 October 1979

Elmer B. Staats
Chairman
Cost Accounting Standards Board
441 G Street, NW
Washington, DC 20548

Dear Mr. Staats:

In the June 1, 1979, Federal Register the Cost Accounting Standards Board published for comment a proposed revision to its regulations to provide special treatment for firm fixed price contracts. The purpose of this letter is to recommend that the Board reject this proposal because it is contrary to the mandate of Public Law 91-379 and because the current requirements better protect the Government.

The current regulations provide for adjustment of contract prices in the event that, after contract award, a contractor initiates an accounting change, the Government requires an accounting change, or it is determined that the contractor failed to comply with cost accounting standards or his established accounting practices. The contract price adjustment may be upward or downward depending upon the nature of the change.

The current regulation fairly protects each party to the contract from injury caused by the unilateral action of the other. The regulation does not penalize contractors for accounting changes required by the Government. At the same time, it avoids penalizing the Government by precluding contractors from pricing Government contracts on one basis and accounting for the costs on another.

With its proposed change, the Board would stipulate that no price adjustments are to be required for firm fixed price contracts if the contractor certifies at the time of contract award that his price is based on applicable Cost Accounting Standards and current or intended accounting practices.

In forwarding the proposed change for comment, the Board does not explain why firm fixed price contracts should be exempted from the current regulation. I see no reason why they should be exempt.

The January, 1970 Comptroller General study of the need for cost accounting standards highlighted the problems involved when contractors shift from one accounting practice to another. Your study pointed out that

> "...a recurring problem in Government contracting is that, in reporting to the Government on both proposed and incurred costs, contractors may select from alternative accounting methods without specific criteria governing such selection."

The study concluded that the Government should have an agreement with the contractor regarding approved accounting practices and suggested that

> "...Appropriate changes in accounting practices needed because of significant changes in a contractor's operations could be recognized by a change in the agreement and appropriate adjustment in price if warranted."

The study supported its conclusions with more than a hundred examples of abuses, many of which involved contractors pricing contracts one way and accounting for them on a different basis. Recognizing these abuses, Public Law 91-379, which established the Cost Accounting Standards Board, stated that the Board's regulations shall require a price adjustment for

> "...any increased costs paid to a defense contractor by the United States because of the defense contractor's failure to comply with duly promulgated cost-accounting standards or to follow consistently his disclosed cost accounting practices in pricing contract proposals and in accumulating and reporting contract performance cost data."

In spite of the Comptroller General study and the admonition of Public Law 91-379, the Board now proposes to reopen the door to abuses the current regulations are intended to prevent. For example, under the Board's proposal, a contractor could sign the required certification that his price is based on current accounting practices and intended changes thereto. But if he did not make the accounting changes or he made them earlier or later

than anticipated, he would, in many cases, be able to realize a windfall profit--in effect, converting cost into unearned profit. Also under the proposed change, a contractor could contend that, on firm fixed price contracts, he no longer owes the Government a contract price reduction, in cases where he implements an accounting change that he did not contemplate at the outset. The Government could overcome these problems only by probing the minds and thoughts of corporate officialdom, a futile task.

To compensate for any advantage contractors would get from not having to reduce their contract prices for accounting changes they make, the Board proposes that prices not be increased for accounting changes the Government requires. In effect, the Board would establish a system of reciprocal inequities.

In summary, the proposed change, if implemented, would undermine basic concepts of the Cost Accounting Standards Board. It would result in resumption of the types of abuses the Board has worked to eliminate without adequate explanation as to why the Board is proposing to change its regulations. The current regulation covering price adjustments, on the other hand, is equitable to both the contractor and the Government. The principle embodied in the regulation is sound, regardless of the type of contract. Thus, there is no valid reason for revising it.

For the above reasons, I strongly recommend that the Board withdraw the proposed change to exempt firm fixed price contracts from present requirements relating to contract price adjustments.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
12 March 1980

Elmer B. Staats
Chairman
Cost Accounting Standards Board
441 G Street, NW
Washington, D.C. 20548

Dear Mr. Staats:

My letter of October 26, 1979, commented on a proposed change to Cost Accounting Standards regulations to provide special treatment for firm fixed price contracts. I pointed out that the current regulation, with regard to firm fixed price contracts, is sound and there is no valid reason for revising it. In the latest proposed revision to its regulations, published in the February 8, 1980, Federal Register, the Board has wisely concluded that firm fixed price contracts "should continue to remain subject to the provisions of the CAS clause as currently contained in its regulations."

The latest proposed revision, however, creates new loopholes for avoiding compliance with Cost Accounting Standards. The proposed change would exempt from Cost Accounting Standards "any firm fixed price contract or subcontract awarded without submission of any cost data." The stated rationale for the revision is that it is unnecessary to be concerned with the contractor's cost accounting practices used for the contract when costs play no part in determining the price which the Government accepts.

The Board has overlooked an important difference between itself and the Department of Defense. The Board has been steadfast in its position that Public Law 91-379 should be equally applied to all contractors and so has granted almost no waivers to Cost Accounting Standards regulations. The Department of Defense, under pressure from essential contractors such as forging companies and computer manufacturers, routinely grants waivers to the requirement for submission of cost and pricing data under Public Law 87-653. By exempting from Cost Accounting Standards contracts awarded without submission of cost data, the Board would effectively transfer its statutory waiver authority to the Department of Defense. This can only weaken the Board's authority and enhance the rewards for contractors who refuse to provide cost data.

In addition, because of differences between the Department of Defense and Cost Accounting Standards Board definition of competition, defense contractors have been able to avoid submission of cost data in circumstances where the Board

intends Cost Accounting Standards to apply. Submission of cost data can also be avoided if a price is "based on" adequate price competition. Board regulations have no special exemption in this regard.

Defense contractors have devised many ways to avoid submission of cost data. The Board's proposed change provides contractors with additional incentive to circumvent the requirements for submission of cost data since they will then not have to comply with Cost Accounting Standards. The proposed change will weaken the safeguards (Cost Accounting Standards and Truth-in-Negotiations) which Congress established for negotiated procurement.

For the above reasons, I strongly recommend that the Board withdraw the proposed change to exempt firm fixed price contracts awarded without submission of cost data from Cost Accounting Standards regulations.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

May 30, 1980

The Honorable James T. McIntyre, Jr.
Director, Office of Management
and Budget
Washington, D. C. 20503

Dear Mr. McIntyre:

In our telephone discussion of March 20, 1980, I emphasized the need for the Office of Management and Budget (OMB) to curb widespread abuses in award of consulting contracts by agencies of the Executive Branch. You agreed and sent your Associate Director for Management and Regulatory Policy, together with one of his assistants, to meet with me that same afternoon. The purpose of this letter is to advise you of events subsequent to our discussion. In my opinion, these events are indicative of more fundamental problems in the Government bureaucracy.

The two men you sent to discuss the consultant problem with me had been working on the problem for some time, apparently as a result of questions raised by President Carter shortly after his inauguration. They said they had gathered statistics from various agencies and were in the process of developing an OMB Circular to tighten existing rules. I pointed out to them some of the schemes I have seen employed to get around current restrictions on the hiring of consultants and emphasized the importance of strict controls. I understood the OMB representatives to say I would be given an opportunity to review and comment on the draft OMB Circular prior to issuance and that they would welcome input by my staff and me based on our experience.

The next I heard on this matter was a letter dated April 1, 1980, from the OMB Associate Director. He thanked me for the meeting and enclosed the March 27, 1980, testimony of the newly appointed Administrator of the Office of Federal Procurement Policy (OFPP). Her testimony outlined to Congress the Administration's proposed new rules regarding use of consultants, although the OMB Circular implementing the new rules apparently was still in draft stage.

Since the Administrator, OFPP had apparently become the Administration's spokesman on the consultant problem, I arranged a meeting with her and one of her assistants on April 15, 1980. At the meeting, I explained to her the need for more stringent safeguards

and made some specific recommendations. She expressed interest and I understood her to say she would have her staff get in touch with mine to work something out. Three weeks later the Administrator sent me the official and final OMB Circular on consultants. It was dated April 14, 1980 - the day prior to my meeting with her. It was then I first realized that the OMB and OFPP officials with whom I had recently met apparently had no intention of pursuing any of the issues I had raised.

A second issue raised with the OFPP Administrator at the April 15, 1980, meeting concerned the American Bar Association's (ABA) Public Contract Law Section and the influence claims lawyers in that Section exerted in the drafting of OFPP regulations implementing the Contract Disputes Act. The problem started several years ago when the ABA arranged to have members of Congress introduce legislation dealing with Boards of Contract Appeals and resolution of contract disputes. The ABA bill contained many loopholes which favored claims lawyers and their clients in lawsuits against the U.S. Government. When I pointed out these loopholes, Congress struck them from the bill and added strict sanctions against those who deliberately submit false claims against the Government.

The ABA's claims lawyers expressed dismay at this turn of events. Upon enactment of the revised statute, now known at the Contract Disputes Act, they assured their members that, in the implementing regulations to be issued by OFPP, they would attempt to overcome "these shortcomings." Specifically, in the January 1979 issue of the Public Contract Newsletter, the Chairman of the ABA's Public Contract Law Section stated:

> "On balance, I believe the gains achieved by this legislation outweigh what many in our Section perceive to be serious shortcomings ... Many of these shortcomings can be overcome or lessened by the implementing regulations, and in that large task our concerned committees are busily engaged."

The influence of the Public Contract Law Section was evident in the various draft regulations promulgated by OFPP.

The OFPP Administrator said that as a result of other comments received on the February 1980 draft, she had withdrawn the proposed regulations for further review and that she would have her staff contact mine to discuss this matter further. As in the case of the consultant issue, no one from OFPP contacted me or my staff to follow up on this matter and the Administrator issued the final OFPP regulations on April 29, 1980 - two weeks after our meeting. In final form, the OFPP regulations are more favorable to claims lawyers and their clients than the provisions of the Contract Disputes Act itself.

I do not assume that OMB and its satellite agency, OFPP, will adopt, or even agree with all my ideas and recommendations. That is not the point. What concerns me is the tendency for senior officials in the Executive Branch to deal with important issues in such a broad and general context that the ensuing policy directives have little, if any, impact on the problem. One reason is that the Government people with firsthand experience are often removed from those who write such directives. In contrast, a few determined people outside Government – claims lawyers in the case of the Contract Disputes Act – are often able to make direct contact on behalf of themselves or their clients and exert disproportionate influence over Government policies, perhaps even to participate in drafting the regulations themselves.

The problem is aggravated when those at the top fail to get into the details of a problem or to follow through to see that it is corrected. The Office of Management and Budget is the office to which one should be able to look for inspiration and assistance in efforts to introduce efficiency in Government. Yet, as in the case of the consultant problem, we often end up with policy directives which only create the impression of progress where little, if any, has been made. In the case of the Contract Disputes Act, we have ended up with a regulation which tends to weaken the Government's ability to preclude frivolous and unfounded claims.

I know that your time is taken up principally by budget matters. Nevertheless, I recommend that you remind your staff their responsibilities in OMB include management as well as budget. I further recommend that you emphasize to them the following:

a. OMB personnel cannot do a good job unless they personally get into the details.

b. They should recognize that "official" comments received from Government agencies on proposed OMB policies generally have been filtered through many levels. Rather than reflecting the collective experience and wisdom of the agency, such input may be nothing more than the views of the staff member highest in the chain of command.

c. OMB personnel should propose what is best for the U.S. Government and not simply seek the middle ground between various interest groups.

d. They must follow through on their commitments. Issuing policy directives is only the first step. Without follow through, policy directives are useless.

e. OMB personnel should take a long range view of their work – as if their present jobs were theirs for life and not just stepping stones in their careers.

I hope the above comments will assist you in your efforts to achieve economy in Government. If I can be of any further assistance to you, please let me know.

Sincerely,

H. G. Rickover

H. G. Rickover

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

JUL 29 1980

Admiral H. G. Rickover, USN
Department of the Navy
Naval Sea Systems Command
Washington, D. C. 20362

Dear Admiral Rickover:

Thank you for your letter of May 30, 1980, in which you expressed concern over OMB's efforts to control the use of consulting services, and to successfully implement the Contract Disputes Act.

We have just recently taken major steps towards eliminating inadequate management control over procurement practices that have allowed abuses in the use of consulting services to occur. On July 2, 1980, I issued a memorandum (copy enclosed) directing that major agencies submit to OMB by August 1, 1980, a proposed plan detailing the agency's management control system for procurement practices, the actions needed to ensure effective implementation of the system, and a specific schedule for the implementation. On July 3, 1980, I met with the heads of the agencies to discuss the essential elements which must be addressed in the plan. On July 7, 1980, the Inspectors General were convened to discuss the critical nature of their role in establishing and evaluating the management control systems.

Special attention will be given in each plan to the control of consulting services arrangements. Each agency shall:

- Designate a career SES manager to implement a management control system for consulting services arrangements and to incorporate OMB Circular A-120 into routine agency operations;

- Raise the level of approval for proposed consulting services of $50,000 or more to the Assistant Secretary level;

- Provide the SES manager and Inspector General copies of the written justification for consulting services within 10 days of approval;

- Require reports containing recommendations submitted to the agency during performance of a consulting services contract to disclose information about the contractor and the contract on the report cover; and

- Require written evaluations of the performance of each consulting services contractor.

We must focus agency management attention on the critical need for improvement of procurement practices -- from the generation of the requirement to the timely close-out of contracts. Only total support and advocacy by management will ensure the successful implementation of the management control systems and, ultimately,

a return to integrity, equity and economy in the Government's overall procurement process. I hope we can count on your support and help in improving the procurement practices for consulting services in the Navy.

The second issue raised in your letter relates to the Office of Federal Procurement Policy's (OFPP) implementation of the Contract Disputes Act contained in Policy Letter 80-3. It is your conclusion that this implementation is more favorable to contractors than the provisions of the Act. We do not agree with your conclusion. The policy guidance issued by OFPP closely follows and accords with the provisions of the Contract Disputes Act and provides the implementation necessary to effectuate the purposes of the Act. The Act, as does the policy guidance, strikes a balance between the rights of the contractor in obtaining a speedy and just disposition of claims, and the rights of the Government in having bonafide and substantiated claims submitted to it for consideration. While we recognize your concern with respect to contractors submitting inflated and fraudulent claims, we believe that the policy guidance issued, which will be implemented by the agencies, provides the necessary safeguards to ensure that Government funds are not used in analyzing and paying inflated or fraudulent claims.

Sincerely,

Jim McIntyre

James T. McIntyre, Jr.
Director

Enclosure

Thanks for your suggestion. We are constantly trying to improve on our management responsibilities.

Jim

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

July 2, 1980

TO THE HEADS OF SELECTED EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Management Control of Consulting Service Contracts and Improvement of Agency Procurement Practices

The President has directed that immediate action be taken to correct the lack of adequate agency management controls over procurement practices. This lack of management control has led to various abuses in Federal contracting activities. While we are confident that most Federal procurements are conducted properly, we must assure the integrity of the Government's procurement process by eliminating the possibility for abuse. It is especially important that competitive contracting procedures be used whenever possible, so that taxpayers are assured of economical and equitable arrangements.

Actions on Consulting Service Contracts

We must take action to focus agency management attention on the critical need for significant improvement in agency management controls and practices. We often devote too much of our effort to policy and procedural issuances and not enough to actual implementation and enforcement of accountability.

Your agency must submit, by August 1, 1980, a proposal to OMB detailing the agency's management control system for procurement practices, including specific actions needed to assure effective implementation of the system and a specific schedule for such implementation. The Inspector General of the agency shall review the plan and provide an evaluation of it to OMB concurrently with the agency's transmittal of the plan.

Agency Management Control System

The Federal procurement process involves fiduciary responsibility for $100 billion annually. From the person who establishes the need for goods and services through the contracting officer and sales disposal officer--all must be held accountable for assuring the integrity of the process.

Your proposed management control system should reflect a close examination of the adequacy of your existing management controls and any changes needed to assure ethical practices and integrity in the procurement process with a specific time schedule for the institution of such changes. At a minimum, it should address the following areas:

1. Agency Alert. Senior agency management must be alerted to the seriousness of this situation and the importance of the corrective actions to be taken.

2. Ethics in Government. There is a broad spectrum of measures to prevent relationships between contractor and Government employees that may result in either "revolving door" employment or pre-selection of a source for contract award without competition. We must assure that the contracting process avoids potential and actual organizational conflicts of interest; i.e., where the contracting party or its affiliate has a collateral interest in the result of the contract.

You should examine the full array of possible means to avoid conflicts of interest and assure adherence to ethics in government standards, and propose a management control system in this area that answers questions such as: What procedures exist for educating agency personnel as to their responsibilities under the Ethics in Government Act and similar legislation and what monitoring system exists to assure adherence to these measures? What procedures assure that information on conflicts of interest is communicated to program, procurement, and fiscal officers involved in the procurement process?

3. Inspectors General. The Inspector General (or equivalent official) and his audit and investigation staff are vital to the success of the management control systems you establish. To stress the critical nature of their role, a special meeting of the Executive Group to Combat Fraud and Waste in Government, established by the President, will be convened next week. The statutory Inspectors General and other equivalent officials will be asked to coordinate their efforts on a government-wide basis.

The agency management control system should reflect the involvement of the Inspector General, emphasizing:

- The need for priority attention by the Inspectors General to the requirements of this letter as a major aspect of their fraud and waste efforts;

- Development of a consistent audit and inspection approach, including consideration of a standard government-wide audit guide;

- Conduct of audit samples of existing consulting service contracts as soon as possible; and

- Evaluations of consulting services as a part of the budget cycle as called for by the Congress in Section 306 of the proposed 1980 Supplemental Appropriations Act.

It is particularly important that your Assistant Secretary for Management or equivalent official work closely with the Inspector General.

4. Consulting Services in Particular.

a. You should designate a career SES manager to be responsible for effective implementation of a management control system that documents and certifies to the need for and award of consulting service arrangements within the agency. The individual should retain the assignment until the policy, guidelines, and management controls specified by OMB Circular A-120 are incorporated into the routine operations of the agency for all consulting service arrangements--personnel appointments, procurement contracts, and advisory committee memberships. Immediate attention shall be given to effecting the provisions of A-120, assuring that:

- Consulting services will not be used in performing work of a policy/decision-making or managerial nature which is the direct responsibility of agency officials (6.a.);

- Consulting services will not be used to bypass or undermine personnel ceilings, pay limitations, or competitive employement procedures (6.c.);

- Former Government employees, per se, will not be given preference in consulting service arrangements (6.d.);

- Contracts for consulting services are competitively awarded to the maximum extent practicable to insure that costs are reasonable (8.a.(3).);

- Appropriate disclosure is required of, and warning provisions are given to, the performer(s) to avoid conflict of interest (8.a.(4).);

- Requirements for written justification, certification, and management approvals are, in fact, implemented (8.a.(1) and 8.b.); and

- The contracting officers' responsibilities, including appropriate identification and reporting to the Federal Procurement Data System of consulting service contracts are, in fact, implemented (6.g.).

b. Implementation of the following additional requirements involving consulting service contracts should:

(1) Raise the level of approval for a proposed consulting services procurement action of $50,000 or more to an official of Assistant Secretary or equivalent rank.

(2) Provide copies of the written justification for the action in (1) above within 10 days of approval to the designated SES manager and to the Inspector General within the agency.

(3) Require that all reports containing recommendations to the agency submitted during the performance of a consulting services contract contain on the cover of the report the following information: (a) name and business address of the contractor; (b) contract number; (c) contract dollar amount; (d) whether the contract was competitively or non-competitively awarded; and (e) name of the sponsoring program individual in the agency and his/her office identification and location.

5. Evaluation of Consulting Services Performance. The management control system should include agency-wide procedures to assure regular written evaluations of the performance of each consulting services contractor.

Other Requirements

Beginning with the agency's submission of proposed fiscal year 1982 budgets, the following reports on consulting services will be required:

1. Report on the planned use of consulting services, including planned obligations and justification of needs, to be submitted with the agency's formal budget request to OMB.

2. Report from the agency's Inspector General providing an evaluation of the agency's progress in institutionalizing effective management controls over consulting services.

These reports will be similar to those required to be submitted to the Congress by Section 306 of the proposed 1980 Supplemental Appropriations Act. OMB will issue more detailed instructions on these reports in the near future.

Timing and Inquiries

Questions on the development of the proposed agency management control system may be referred to the Office of the Assistant Director for Management Improvement and Evaluation, telephone number: 395-4960. Questions on OMB Circular A-120 and procurement policy matters should be directed to the Office of Federal Procurement Policy, telephone number: 395-6810.

James T. McIntyre, Jr.
Director

ADDRESSEES

Department of Agriculture
Department of Commerce
Department of Defense
Department of Education
Department of Energy
Department of Health and Human Services
Department of Housing and Urban Development
Department of Interior
Department of Justice
Department of Labor
Department of State
Department of Transportation
Department of the Treasury
Environmental Protection Agency
General Services Administration
National Aeronautics and Space Administration
Veterans Administration

92-784 O - 82 - 12

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
26 June 1980

MEMORANDUM FOR THE COMMANDER, NAVAL SEA SYSTEMS COMMAND

Subj: Consultants, Washington Redskins and the Naval Sea Systems Command

Encl: (1) Columbia Research Corporation invitation to "A Toast to the Redskins - 1980"

1. Enclosure (1) is an announcement that appeared last night on the windshields of cars parked in the basement of the buildings primarily occupied by the Naval Sea Systems Command. It consists of an open invitation by the Columbia Research Corporation to attend "A Toast to the Redskins - 1980" to be held between 11:15 and 12:45, June 27, 1980, on the 13th floor of National Center Building 3. According to the announcement, the affair will feature as special guests Washington Redskins players Joe Theismann, Pete Wysocki and Brad Dusek, together with "The Redskinettes". I do not know the extent to which this announcement was distributed in other parking lots or office spaces occupied by Navy personnel.

2. As you are aware, the Washington Post has been publishing a series of articles regarding consulting abuses. Yesterday's article specifically mentioned a NAVSEA contract. In my opinion, the Columbia Research Corporation's open invitation to entertain Navy personnel is inappropriate and unless prompt action is taken will result in further unfavorable publicity for the Naval Sea Systems Command. Specifically:

a. The Columbia Research Corporation has consulting contracts with the Naval Sea Systems Command and presumably with other segments of the Navy.

b. The Columbia Research Corporation is headed by a retired Vice Admiral who was one of your predecessors as Commander of the Naval Sea Systems Command.

c. The Columbia Research Corporation is one of only a few consulting firms which have arranged to lease office space in National Center Building 3 which is otherwise occupied by Naval Sea Systems Command offices.

d. There is no relationship that I know of between the Washington Redskins football team, its cheerleaders, and the work of the Naval Sea Systems Command. If, in fulfilling its responsibility for acquiring and maintaining ships and weapons, the Navy needs assistance from the Redskins, and cheerleaders, the Navy is in worse shape than I had thought.

e. By scheduling a one and a half hour office party during working hours, the Columbia Research Corporation in fostering additional Navy business will be distracting Government employees from their business and placing them in positions in which conflicts of interest may arise. If the consulting firm simply wished to promote the Washington Redskins rather than solicit additional business from the Navy, it would hold its parties on the weekend and at the football stadium.

3. I realize there are other distractions available in the area to entice NAVSEA employees away from their jobs for extended lunch breaks. I understand that the entertainers at a restaurant across the street are more scantily attired than the Redskinettes; however, in that case the proprietor is trying to encourage his customers to spend their own money. In the case of entertainment provided by consulting firms, such as Columbia Research Corporation, the purpose is to gain favor with customers responsible for spending Government money.

4. I strongly recommend that you take steps to disassociate the Navy from the proposed party sponsored by the Columbia Research Corporation. Specifically, I recommend you do the following:

a. Make every effort to get Columbia Research Corporation to cancel the party. Retired naval officials frequently contact senior Navy officers for favors. I see no reason why active duty Navy officers cannot attempt to influence former Navy officers and their associates who are not acting in the best interest of the Navy.

b. Ensure that costs associated with the proposed party are not reimbursed to Columbia Research Corporation under any Government contract, directly or indirectly.

c. If Columbia Research Corporation insists on going ahead with this party, request Naval Sea Systems Command employees not to attend on the basis that their attendance would be inappropriate and would reflect adversely on the Navy. I have already instructed my own personnel not to attend.

d. Remind NAVSEA employees of the prohibitions against Government employees accepting gratuities offered by Government contractors. In this regard, the Deputy Secretary of Defense and the Chief of Naval Operations have recently issued memoranda to senior Navy officials reiterating the importance of Defense Department personnel maintaining the highest standards of professional and personal integrity, particularly with respect to acceptance of entertainment or meals paid for by those who have or seek business with the Department of Defense.

5. If the judgement exercised by Columbia Research Corporation in sponsoring and promoting the proposed party is indicative of the judgement the company applies under Navy contracts, this incident underscores the waste that is so often associated with consulting contracts.

6. To preclude future problems of this sort, I recommend that, in future contracts with this firm and with other consulting firms, the Naval Sea Systems Command obtain the contractor's specific agreement that he will not offer or give entertainment or gratuities, nor sponsor promotional activities for Government employees. To the extent consulting contracts are necessary — and I believe that in nearly all cases the Navy would be better off without them — the determination of who gets what contracts should depend strictly on the bonafide needs of the Navy and the capability of the firm. There should be no room in the process for a consulting firm to enhance its business based on personal contacts or social activities such as that described in Enclosure (1). These, of course, are intended to influence Navy officials to award business to them.

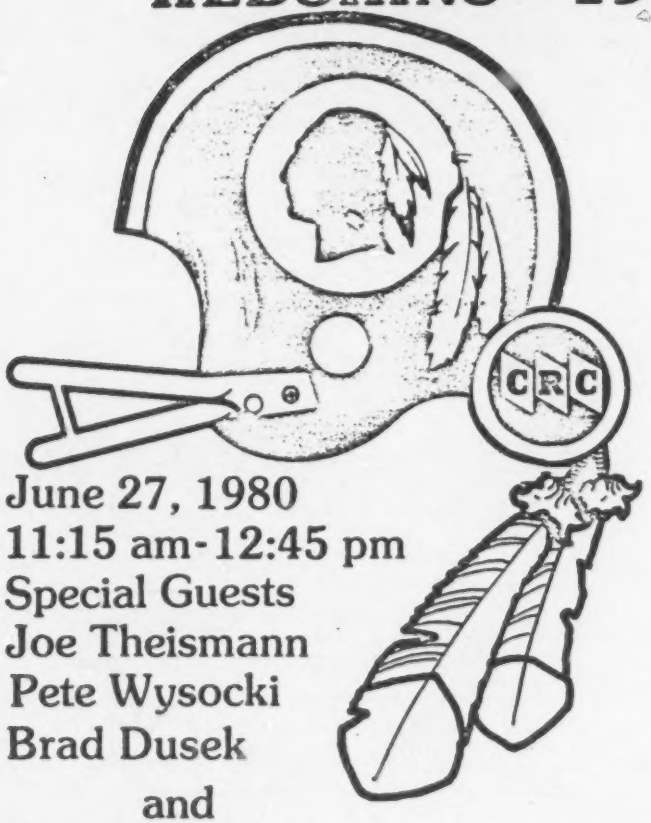
7. I would appreciate being informed of the action you take with respect to the above.

H. G. Rickover

Copy to:
Secretary of the Navy
Chief of Naval Operations
Chief of Naval Material

Columbia Research Corporation
invites you to

A TOAST TO THE REDSKINS—1980



June 27, 1980
11:15 am-12:45 pm
Special Guests
Joe Theismann
Pete Wysocki
Brad Dusek
and
The Redskinettes

NC3—13th Floor—(703) 841-1445
2531 Jefferson Davis Highway, Arlington, VA 22202

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
28 June 1980

The Honorable Dr. Richard C. Atkinson
Director, National Science Foundation
Washington, D.C. 20550

Dear Dr. Atkinson,

This is in response to your request for my views regarding science and engineering education policies for our secondary schools and universities and what should be done to ensure we are developing enough well-qualified scientists and engineers to meet the country's future needs. I understand you have been surveying the scientific and engineering community in response to the President's request that you and the Secretary of Education look into this problem.

I do not believe the Federal Government can or should do much with respect to controlling the quantity of scientific and engineering graduates from our universities. While reports of layoffs in engineering industries during the 1970's may have caused many students to choose other fields of study, we are now beginning to see increased engineering enrollments as students respond to increased demand. The current shortages in engineering and some scientific fields will tend to correct themselves over time. I do not believe the Government should try to stimulate an artificial demand for people in these areas by undertaking "make work" projects.

More important than the quantity of scientific and engineering graduates is the quality of these graduates which, in turn, must be addressed in the context of the overall quality of education in our public schools. It is futile to expect to achieve high standards for academic achievement and intellectual discipline in mathematics and science in schools that are otherwise academically undisciplined.

Today we tend to expect too little of our schools academically and too much from them as a convenient forum for tackling other problems. The blame must be shared among parents, school administrators, and teachers.

The primary function of our schools is to develop the intellect of our children. Yet today our schools are overburdened with peripheral matters — extra curricular activities, athletics, drug education, sex education, consumer education, and other programs which tend to detract from this primary purpose.

Despite much ado in recent years about schools going "back-to-basics", a proliferation of easy courses in non-academic subjects still lures students away from courses in solid subjects that require hard work and rigorous thought. By choosing these easy, non-academic courses in high school, many capable students can effectively foreclose the possibility of ever pursuing scientific and technical curricula in college. They graduate without enough background in mathematics and science to qualify.

Even in the academic subjects, many teachers and administrators, in an attempt to make learning fun, have de-emphasized disciplined thought and work habits, stressing "creative freedom", often to the detriment of academic achievement. Teacher's colleges, which traditionally emphasize education theory over mastery of subject matter, are turning out teachers who are not knowledgeable in the subjects they teach. In certifying the teachers for the classroom, many states, if they qualify teachers by subject matter at all, base their certification on courses taken, rather than on any direct measurement of expertise in that field. In this regard, grade inflation and dilution of standards at our colleges and universities in recent years, as they strive to keep enrollments high enough to pay operating costs, have made most college records worthless as an indicator of knowledge or achievement. In fact, in recent years many colleges have not recorded failing grades on student transcripts. This is fraud of the public, particularly those who hire graduates of such schools. Nowhere is it more necessary for teachers to have a solid grasp of subject matter than in the fields of mathematics and science. Yet many schools fall miserably short in this area.

By promoting the notion that learning is easy and entertaining, we are letting our children grow up believing they need not struggle to excel — a notion which is damaging to both the child and to society. This problem is exacerbated by parents who spend evenings huddled around the television set, allow their children to do likewise, and show more interest in their children's athletic skills or popularity than in their academic accomplishments. Even schools tend to give less recognition for academic achievement than they do for achievement in activities outside the classroom.

We cannot expect to turn out top-flight scientists and engineers from mediocre schools. To improve public education in general we must place more emphasis on rigorous academic programs, with far fewer elective courses at the high school level. Students at that age need firm direction in what courses they take. In addition, we need to set high standards of performance for students and teachers and seek a higher degree of parental involvement and support in the education process.

Many states and localities have recognized the need to upgrade their school programs and are taking steps to do so. Considerable progress has been made in the area of competency testing.

To supplement these efforts, and to help ensure enough well-qualified scientists and engineers to meet the nation's needs, I recommend that the Federal Government do the following:

1. Assemble a panel of nationally prominent persons to develop voluntary national standards and tests in the basic subjects, including science and mathematics, for the grammar through high school levels. These standards and tests should be made available to school boards upon request as a tool for evaluating their school's performance, or as an aid in developing their own standards and tests.

2. Survey leading universities to develop a sample core curriculum that would equip high school students for college level work in engineering or science. Results should be published to provide a guide for developing high school curricula that will ensure that students who aspire to or are capable of collegiate work have taken as required courses enough work that they will not subsequently be precluded from scientific or technical study.

3. Allow parents to have their children tested against the national standards, free of charge. In this way parents, in exercising local control of education, will not be forced to rely solely on the opinions of educationists as to the performance of local schools.

4. Develop sample competency standards and tests for secondary mathematics and science teachers as an aid to localities that are interested in setting standards for teachers.

5. Assemble a panel of knowledgeable industrialists and other consumers of the products of our colleges and universities to set standards regarding the type of technical knowledge and skills graduates should have to be of most use. In my opinion, there tends to be over specialization in the education of our engineers and scientists, often resulting in graduates who are unable to apply their knowledge to broader problems outside their particular specialty. This is of particular concern with today's rapidly changing technology.

The task of improving scientific and technical education is a formidable one which involves many professional and citizens groups at all levels of Government. In my many years of Government service, I have often seen those with vested financial interest respond to this kind of effort by calling for vast and expensive new Government programs. In my view, it is not a lot of money that is needed as much as an overall commitment to excellence.

I appreciate the opportunity to comment on this very important subject, and I wish you luck in your efforts to improve scientific and technical education in this country.

My comments above are based on the perspective gained from nearly a half-century of responsibility in organizing, planning, designing, building, and operating complex engineering projects. Also, during this period, I have personally interviewed about fifteen thousand engineers and scientists from our better colleges for entry into my program. If you desire anything further from me, I will be happy to help where I can.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
3 September 1980

MEMORANDUM FOR THE CHIEF OF NAVAL RESEARCH

Subj: Independent Research and Development (IR&D) being conducted by Westinghouse Electric Corporation, Electro-Mechanical Division; comments concerning

Encl: (1) NAVSEA comments on Westinghouse Electro-Mechanical Division (WEMD) Independent Research and Development Projects

1. In prior correspondence, I have pointed out specific problems with the Defense Department's Independent Research and Development (IR&D) Program. I pointed out that the Government has no direct control over the cost of IR&D work, even though it may be paying for all or a substantial portion of this work; that the projects performed under IR&D often benefit primarily commercial work; and that contractors under this program obtain exclusive rights to technical data and inventions which, in many cases, have been financed almost completely with public funds. I have also pointed out that the Department of Defense review procedures which are supposedly intended as safeguards are ineffective and largely cosmetic.

2. I have just completed a review of the Westinghouse Electric Corporation's 1980 IR&D proposal for Westinghouse Electro-Mechanical Division (WEMD). The Westinghouse proposal further illustrates the problems that arise under our present IR&D program. WEMD manufactures coolant pumps for the Naval Reactors program. This constitutes about 35% of WEMD's total workload and virtually all of the Division's defense work. The remainder of the work at WEMD is for commercial customers. In buying coolant pumps for use in Naval nuclear power plants, the Navy would absorb nearly $450,000 of the cost of WEMD's proposed IR&D program.

3. The Westinghouse IR&D proposal identified $1.276 million in research programs to be conducted by WEMD. There is no way to tell from the brochure whether the estimated cost of these programs is reasonable. However, in reviewing the project descriptions I conclude that about 85% of WEMD's research projects are directed specifically at improvement of products for commercial nuclear power plants. These projects have no value to the Government. In my view they do not pass the statutory requirement for "potential military relevance" which is a prerequisite under the law for allowing these costs to be charged to Government contracts.

4. I believe the remaining 15% of the IR&D projects proposed by WEMD are not worth the approximately $70,000 the Government would have to pay for this work. This money could be far better spent on more directly oriented research under Government sponsorship. The Government already makes a substantial contribution to the research and development efforts of WEMD in the form of many millions of dollars that we have spent over the years in Government financed research and development contracts, the spinoff of which is no doubt of substantial benefit to the company's commercial work. Under these circumstances I question why it is necessary for the Government to pay as well an additional tax to finance a corporation's independent research and development activities.

5. Review of the Westinghouse IR&D proposal highlights another problem with the Navy's IR&D system. From what I can determine the 1980 proposal has little, if anything to do with the ceiling the Government sets on IR&D expenses for 1980. As I understand it, the ceilings for various corporate IR&D programs are established long before those who set the ceiling are able to have these programs reviewed by the cognizant technical personnel. As a result defense activities end up reviewing and commenting upon one year's IR&D proposal, but the conclusions are applied to the succeeding year.

6. Enclosure (1) contains more detailed comments on $1.081 million of specific IR&D projects outlined in the Westinghouse proposal. I recommend that for purposes of the Navy review of IR&D $1.081 million of the WEMD proposal be disallowed as not meeting the test of having "potential military relevance" since it is related only to commercial work.

7. I further recommend the Navy:

a. Require contractors to submit detailed verifiable cost estimates for proposed IR&D projects.

b. Synchronize the IR&D review process so that comments coming out of the review process are taken into account in establishing the cost ceiling to be applied to that proposal.

c. Disapprove IR&D projects that overlap research and development work being conducted at Government laboratories or other laboratories at Government expense.

8. I would appreciate being advised of the actions taken in this matter.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Research, Engineering and Systems)
Assistant Secretary of the Navy
(Manpower, Reserve Affairs and
Logistics)
Chief of Naval Material
Commander, Naval Sea Systems Command

NAVSEA COMMENTS ON WESTINGHOUSE ELECTRO-MECHANICAL DIVISION (WEMD) INDEPENDENT RESEARCH AND DEVELOPMENT PROJECTS

Project Number (Cost)	Project Title	Comment
EM-80-1D ($246,000)	Reactor Coolant Pump Development	This project is directed toward improving the performance of the Westinghouse Model 93A reactor coolant pump. This pump is used only in large civilian nuclear power plants and is of a size and type not suitable for military applications. Therefore, this project has no military relevance and is not appropriate for IR&D funding.
EM-80-2D ($299,000)	Seal Development	This project is directed toward improving the reliability of shaft seals for reactor coolant pumps. These seals are suitable for use only in large civilian nuclear power plants. There is no military application for this equipment. Therefore, this project is not appropriate for IR&D funding.
EM-80-3D ($336,000)	Valve Development	This project appears to be directed at improvement of WEMD's line of valves for the civilian nuclear industry. WEMD does not supply valves for military nuclear applications and has repeatedly indicated no interest in developing a capability to provide such valves. Therefore, this project is inappropriate for IR&D funding.
EM-80-6D ($85,000)	CRDM Development Program	This project is directed toward improvement of WEMD's control rod drive mechanism line. These mechanisms are designed for, and used exclusively by, the civilian nuclear power industry and are not suitable for military application. Therefore, this project is not appropriate for IR&D funding.

EM-80-8D ($115,000)	Auxiliary Pump Development	This project is directed toward improvement of WEMD's line of auxiliary pumps for civilian nuclear power service. These pumps are designed for, and are used exclusively by, the civilian nuclear power industry and have no military application. Therefore, this project is not appropriate for IR&D funding.

DEPARTMENT OF THE NAVY
OFFICE OF NAVAL RESEARCH
ARLINGTON, VIRGINIA 22217

IN REPLY REFER TO

09 JAN 1981

MEMORANDUM FOR DEPUTY COMMANDER, NAVAL SEA SYSTEMS COMMAND

Subj: IR&D being conducted by Westinghouse Electric Corporation, Electro-Mechanical Division; comments concerning

Ref: (a) NAVSEA memo for the CNR of 3 Sep 80

Encl: (1) Copy of CNR memo to Head, Triservice Negotiation Staff, NAVMAT dtd 5 Nov 1980
(2) Copy of CNR memo to Head, Triservice Negotiation Staff, NAVMAT dtd 19 Nov 1980

1. Reference (a) cited several problems existing within the Defense Department's IR&D program and recommended methods by which Navy could exert more influence on proposed IR&D projects.

2. I concur in principle with your comments and share your concerns. While current government and DOD regulations and procedures restrain Navy's ability to more directly manage industry IR&D programs as you recommend, the need for improvements is recognized by all Services. To this end, meetings are being held among Service IR&D Coordinators to discuss areas of common concern and specifically to seek methods for improving TriService evaluations. However, major changes in the review procedures require approval of the DOD Policy Council as outlined in DODINST 5100.66. Areas where Navy may be able to effect some positive improvement through unilateral action are discussed briefly below.

3. Currently, industrial IR&D projects that overlap government R&D work and the allocability of industrial IR&D projects to DOD contracts may not be recognized as such for lack of proper expertise among the reviewers. The NAVSEA comments on Westinghouse Electro-Mechanical Division (WEMD) IR&D projects [enclosure (1) to reference (a)] are an example of what can be determined through use of proper expertise. More emphasis will be placed on ensuring that qualified Navy experts support the review evaluation and advance agreement negotiation processes.

4. Current DOD guidance to industry permits IR&D technical plans to be submitted within the first ninety days of a company's fiscal year. This timing precludes completion of evaluations prior to initiation of advance agreement negotiations for all Services. My office has initiated discussion with the other Services on the desirability of requiring submission of technical plans prior to the beginning of a company's fiscal year to eliminate this problem. It is my intention to seek such a recommendation for submission to the DOD Policy Council.

Subj: IR&D being conducted by Westinghouse Electric Corporation, Electro-Mechanical Division; comments concerning

5. By separate correspondence [enclosure (1)], NAVSEA comments on WEMD IR&D projects were forwarded to the Head, Triservice Negotiation Staff, the DOD organization responsible for taking appropriate action. Enclosure (2) directed that this staff additionally consider the issue of allocability of the WEMD nuclear power plant projects to DOD contracts in determining the disposition of the Navy recommendations.

ALBERT J. BACIOCCO, JR.
Rear Admiral, USN
Chief of Naval Research

Copy to:
ASN(RE&S)
ASN(MRA&L)
CNM
Commander, NAVSEA

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

10 February 1981

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Recommendation against loosening the criteria governing allocability of selling costs to defense contracts

1. I understand that the Defense Acquisition Regulation (DAR) Committee is considering a proposed change to Defense Department cost principles governing reimbursement of contractor selling expense (DAR Section 15-205.37). If adopted, the proposed change would open the door for defense contractors to charge to their Government contracts selling costs aimed primarily at promoting commercial or foreign sales. The purpose of this memorandum is to recommend that the Navy dissuade the DAR Committee from adopting the proposed change.

2. For many years several large defense contractors have been looking for ways to get the Department of Defense to underwrite company efforts to develop new markets and promote commercial sales. One large conglomerate has a division which is devoted primarily to manufacturing large specialized equipment for the Navy. As a sole source supplier, the company can afford to run up the costs without losing the business. Because the amount of defense work they receive depends on the Navy's needs, not on company sales efforts, there is little or no selling expense involved. The company accountants, however, contend that, under these contracts, the Navy should pay a share of the corporation's selling expenses involved in attracting commercial customers. Other large defense contractors are trying to get the Defense Department to help pay the costs of their efforts to market military or commercial products overseas.

3. As currently written, the Defense Acquisition Regulations provide for Government reimbursement of contractor selling expenses only to the extent that they benefit the U.S. Government in a specific way. Section 15-205.37 states:

> "Allocability of selling costs will be determined in the light of reasonable benefit to the U.S. Government arising from such activities as technical, consulting, demonstration, and other services which are for purposes such as application or adaptation of the contractor's products to U.S. Government use for its own requirements."

Under the proposed change, however, the test for allocability of sales expenses to defense contracts would be whether the sales activities have a "demonstrated potential for materially reducing overall costs." This would be tantamount to making all contractor

selling expenses allowable, since defense contractors would always be able to demonstrate that more business results in reduced overhead rates – the rationale some of them now use to claim that the Government "benefits" from their selling activities in commercial and overseas markets. Under that criteria, advertising expenses or even bribes, could be rationalized as benefiting the Government.

4. I understand that the current review of the DAR selling costs coverage was started to determine if the Arms Export Control Act specifically prohibits charging Foreign Military Sales selling costs to Government contracts. As usual, defense lobbyists have seized this opportunity to try to slip in a major policy change – in this case, one that could result in the U.S. taxpayer subsidizing defense contractors' commercial and foreign selling expenses. In addition to driving up the cost of military hardware, the proposed change would give contractors heavily engaged in defense work a substantial and unfair advantage in commercial markets over competitors who are not in a position to charge their selling and marketing expenses to Government contracts.

5. I believe that the Navy should strongly object to the proposed change in the Government's policy on selling costs. I recommend that parts 15-205.37(b)(1), 15-205.37(b)(2)(ii), and 15.205.37(c) of the proposed change be deleted to ensure that selling costs are charged to Government contracts only when actual benefits are received.

6. I would appreciate being advised of the actions you are taking in this regard.

H. G. Rickover

DEPARTMENT OF THE NAVY
HEADQUARTERS NAVAL MATERIAL COMMAND
WASHINGTON, D.C. 20360

IN REPLY REFER TO
Ser 00/0367
22 April 1981

MEMORANDUM FOR THE DEPUTY COMMANDER, NUCLEAR PROPULSION DIRECTORATE,
NAVAL SEA SYSTEMS COMMAND

Subj: Allocation of Selling Costs to Navy Contracts

1. I am in receipt of your memorandum of 10 February 1981 on the subject of selling expenses. It is important to note, at the outset, that the selling costs under discussion are those necessary to "order-getting" activities. Costs such as advertising or entertainment which are unallowable in their own right under separate provisions of DAR XV are not eligible for reimbursement simply because they qualify as selling costs. They would remain unallowable under the proposed revision.

2. The Defense Acquisition Regulation (DAR) Council has assigned the case to the DAR XV, Part 2 Subcommittee as DAR Case 79-103. The case is currently in that part of the regulation cycle in which comments of industry and other agencies are considered. The case has a controversial history emanating from a DAR change dated 12 March 1979 which in retrospect appears to have been based on an erroneous interpretation of the Arms Export Control Act (AECA). Originally, the DAR Council believed that the AECA prohibited the allocation to U. S. Government work of the cost of selling efforts aimed at obtaining Foreign Military Sales (FMS). When challenged that interpretation could not be supported. The controversy surrounding the case centers on whether that restriction should be continued even though not required by the AECA. In an earlier phase of the staffing of this case, a majority report of the DAR XV, Part 2 Subcommittee advocated that the restriction be continued by requiring that selling costs be grouped by "class of customer" (i.e., U. S. Government, FMS or Commercial) and allocated only to current work within that group. The Subcommittee majority believed that such a method would correctly reflect the flow of "benefits" of selling costs. Your memorandum supports that method. The Navy took a formal minority position with the DAR Council on the case recommending that a broader allocation base be employed where it is equitable to do so. The Navy believed that the narrow allocation of selling costs serves to discourage efforts on the contractor's part to obtain increased volume and reduce future unit costs to the Navy. The DAR Council with the urging of the DOD Director of Contracts and Systems Acquisition developed proposed language which largely accommodated the concerns of the Navy Minority. I support the proposed language because:

a. The Navy should support and not oppose selling efforts that are likely to result in reduced future unit costs, whether that selling effort is directed at the Government or a Commercial market. It is important to note that the proposed language does not allow selling costs lacking a demonstrated potential for materially reducing overall costs. No one is promoting the allowance of unreasonable or imprudent selling efforts.

b. Fracturing the broad allocation of a new business cost such as selling invites problems with regard to the allocation of other new business costs, such as Bid and Proposal (B&P) where it is generally concluded that the costs of proposing to the Navy are proportionately higher than those for commercial work. As of now, B&P costs are distributed over all work of the business unit in which they are incurred. It will be difficult to continue to justify the present B&P allocation method if a fractured selling pool becomes our policy.

3. You are correct in understanding that the current case was initiated to "determine if the Arms Export Control Act specifically prohibits charging Foreign Military Sales selling costs to Government contracts." The Navy representatives at the DAR XV, Part 2 Subcommittee have from time to time advocated the simple deletion of the prohibitive phrase. The result would be the language that previously covered selling costs. The Air Force representative to the DAR XV, Part 2 Subcommittee has continually held that going back to the former language is no longer a viable choice. The Air Force contention is that the Administrative Contracting Officers (ACOs) settling overhead rates on the present decentralized basis are not capable of coping with the nuances of phrases such as "determined in the light of reasonable benefit to the U. S. Government . . ." In the opinion of the Air Force-led majority of the Subcommittee, it was better to have a simple, easily negotiated cost principle than to try to cope with the difficulties of negotiating a reasonable allowance for selling costs that will be in the long-term best interest of both contracting parties. I am aware that selling costs by their nature are difficult to negotiate. However, it must be remembered that the Government handles company-wide contract administration matters such as the annual settlements of overhead and forward-pricing rate updatings through one ACO per business unit or one corporate administrative contracting officer (CACO) per corporation. Individual PCOs will not be required to negotiate selling costs with each buy. I understand that ACOs and auditors will have to be alert to situations in which contractors attempt to have the Navy bear the proportionately high cost of opening a new market, subsequently split-off that market when it matures and, thus, effectively deny the Navy the "benefits" of past selling efforts. These recognition and negotiation difficulties should not force us to a policy that is harmful in several ways. In addition to the obvious effect of increasing future unit costs to the Navy, the narrow allocation policy is likely to increase contractors' tendencies to organizationally isolate Government work. If the Government is not willing to pay its fair share it would discourage potential Navy suppliers.

4. The best quality settlements of selling expense will emerge if we are able to provide responsible field people with guidelines sufficiently comprehensive to ensure that they are employing the proper considerations

together with a cost principle that can accommodate the full range of their good judgment. As of now, there is a possibility that a compromise will be reached within the DAR XV, Part 2 Subcommittee. If reached, it will likely include greater amplification of matters that field people should consider in the negotiation of selling costs. It would endorse the broader allocation concept while emphasizing increased use of advance agreements where there are concerns about organizational realignments. It would provide for recapture of selling costs in cases where harmful reorganizations were not adequately anticipated. As this is a committee function, there is no certainty that such a compromise can be struck by the DAR XV, Part 2 Subcommittee or that the DAR Council or the DOD Director of Contracts and Systems Acquisition will endorse it.

5. The purpose of your recommendation that subparagraphs 15-205.37(b)(1), 15-205.37(b)(2)(ii), and 15-205.37(c) of the proposed language be deleted to "insure that selling costs are charged to Government contracts only when actual benefits are received" is not clear. We cannot determine how you would treat selling costs until their success is known and, for that matter, whether unsuccessful selling costs are to be disallowed. Selling costs, as well as other new business costs such as Independent Research and Development (IR&D) and Bid and Proposal (B&P), present a unique accounting problem that precludes normal application of the matching concept. That concept calls for expenses to be charged to the period in which the revenue with which the expenses are associated is realized. An exception is made for those expenses which as a practical matter cannot be associated with any other period. Selling expenses in businesses characterized by long lead-time orders are one of those practical exceptions in that they relate substantially, if they are successful, to work to be performed in future fiscal periods. The problematical nature of selling efforts causes accountants to be reluctant to capitalize or defer these costs. As a result, selling costs are charged off to expense in the period of incurrence in virtually every instance. The Cost Accounting Standards Board did not modify that practice for CAS-covered contracts although they possessed the authority to do so.

6. In summary, the cost principle advocated by your memorandum is likely to reduce costs to the Navy only in the short-term sense. The Navy should not adopt a position which opposes efforts to reduce future unit costs to the Navy, whatever the source of the abatement. If implemented, the "class of customer" allocation of selling costs would further weaken the Navy's efforts to maintain and expand our industrial base.

A. J. WHITTLE, JR.
Chief of Naval Material

92-784 O - 82 - 14

Department of Energy
Washington, D.C. 20585

February 17, 1981

W. S. Heffelfinger, Director of Administration

COMMENTS ON PROPOSED DEPARTMENT OF ENERGY ORDER ENTITLED "MANAGEMENT OF SUPPORT SERVICES CONTRACT ACTIVITY"

The purpose of this memorandum is to provide my comments on the proposed DOE order entitled "Management of Support Services Contract Activity," which the Office of Organization and Management Systems has routed throughout DOE for review.

The proposed order states its purpose is "to provide the policy, procedures and responsibilities for the management of support services contracts" within DOE. The order encompasses the types of contracts commonly referred to as consultant services contracts. I am pleased DOE is showing initiative in this area. As you must be aware, throughout Government, excessive reliance on contractors to provide consultant services has resulted in widespread waste and abuse. I believe the proposed DOE order, if implemented, will help deter unnecessary and wasteful consultant contracts in DOE. However, in my opinion, some Government servants will continue to find it all too easy to award consultant contracts - often easier than doing the work themselves. Accordingly, I believe several areas of the proposed order should be strengthened.

Last August I testified before two Congressional committees interested in passing legislation to preclude unnecessary and wasteful consultant contract awards. I pointed out that to effectively deter unnecessary contracts, procedures were needed that would make awarding consultant contracts onerous, and subject to high level review. Enclosed is a copy of my prepared statement before the House Committee on Post Office and Civil Service, which is considering legislative safeguards. You may find some of my recommendations to Congress useful in tightening the requirements of the proposed DOE order. In particular, I recommend the DOE order incorporate the following procedures, which are contained on pages 8 and 9 of my Congressional testimony:

1. Any company that does consulting work or employs a subcontractor to do consulting work should be required to disclose the names and past affiliations of any former Government employees who will be used on a project; the proposed rates of pay for their services; and in the case of unsolicited proposals, whether any Government officials suggested directly or indirectly the submission of that proposal.

2. All consultant contract awards over a certain threshold should be approved by an Assistant Secretary. I would not allow Assistant Secretaries to delegate this responsibility to others. Such delegation would defeat the purpose of requiring high level review of proposed consulting contract awards, namely to make the senior officials personally aware of and responsible for the contract awards. I further recommend that each approving official in the chain of command considering a proposed consulting contract award be required to certify he is personally aware of the work to be done; the work needs to be done; and cannot be performed in-house.

3. The DOE official who initiates a request for a consulting contract should include in the formal request for approval to contract a copy of his own job description and the function of his organization. Approving officials could then determine whether the contract would be for work which Government personnel are either capable of performing or paid to perform.

4. The DOE Inspector General should review annually the Department's use of consulting contracts and compliance with applicable requirements. The results of these reviews could then be submitted to the Office of Management and Budget and appropriate Congressional oversight committees.

I trust my recommendations will be of use in DOE's efforts to preclude waste and abuse in the award of consultant services contracts. Please let me know if I can be of further assistance.

H. G. Rickover
Deputy Assistant Secretary
for Naval Reactors

Enclosure

Copy to:
X. D. Helms, Director, Office of
Organization and Management Systems
R. M. Rosselli, Acting Deputy Director,
Office of Plans and Resource Management,
Office of Nuclear Energy

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
24 February 1981

MEMORANDUM FOR THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Subj: Independent Research and Development (IR&D) costs at Westinghouse Electro-Mechanical Division

1. Under the Department of Defense procurement rules large defense contractors are required to submit their IR&D proposals for review by the various services. The stated purpose of these reviews is to make a determination required by law that all items included in IR&D costs charged to the Government have "potential military relevance".

2. I have reviewed those elements of the 1980 Westinghouse Electric Company IR&D proposal involving work by the Westinghouse Electro-Mechanical Division, the sole supplier of main coolant pumps for the Naval Reactors program. The company has included as IR&D the cost of work which has no potential military relevance but which instead is being done strictly in support of commercial products. Since these items do not meet the statutory test for reimbursement of IR&D costs, I so notified the Navy negotiators who in turn asked Westinghouse to delete the items from its proposal. The company refused and asked for a formal determination in this regard.

3. I understand that under the Defense Department IR&D procedures, determinations that items do not have a "potential military relevance" must be reviewed by a special IR&D technical evaluation group that reports to you. Apparently this group is scheduled to review in the near future the Navy's position regarding the Westinghouse proposal. The purpose of this memorandum is to point out the importance of the disallowance of these items.

4. There is a widely held perception which may be true, that the DOD's review of IR&D is essentially window dressing; and that the Defense Department rarely, if ever, sustains a finding that particular IR&D projects have no potential military relevance. The Westinghouse proposal in my view offers an excellent test case:

a. The work WEMD performs for my program constitutes about 35% of WEMD's total workload and virtually all of the Division's defense work.

b. Necessary development work at WEMD on naval reactor components is obtained under direct contracts between WEMD and the Naval Nuclear Propulsion Program prime contractors under my technical cognizance.

c. Of the $1.276 million IR&D program proposed by WEMD, $1.081 million is directed toward improvement of products for commercial nuclear power plants. Specifically, WEMD has proposed work on pumps, valves and control rod drive mechanisms which are of a size and type not suitable for use in naval nuclear propulsion plants. Any technology that might evolve from this work is of negligible value, if any, to military applications.

d. Westinghouse is adamant that these IR&D projects are legitimate charges the Government should pay and that they have "potential military relevance".

5. If the research work proposed by WEMD has "potential military relevance", then I cannot conceive of a venture that would fail this test. WEMD simply wants the Navy to subsidize its commercial business. These costs should not be charged to the government - particularly in this period of budget stringency and emphasis on eliminating waste in the expenditure of government funds.

6. I strongly recommend that you and your technical evaluation group support the Navy determination that WEMD's IR&D costs should be disallowed.

7. I would appreciate being informed of the action you take in this regard.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Research, Engineering and Systems)
Assistant Secretary of the Navy
(Manpower, Reserve Affairs and Logistics)
Chief of Naval Material
Chief of Naval Research
Commander, Naval Sea Systems Command

THE UNDER SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

RESEARCH AND ENGINEERING

27 MAR 1981

MEMORANDUM TO THE DEPUTY COMMANDER, NUCLEAR PROPULSION DIRECTORATE, NAVAL SEA SYSTEMS COMMAND

SUBJECT: Independent Research and Development (IR&D) Projects of the Westinghouse Electro-Mechanical Division

This is in response to your 24 February memorandum concerning the IR&D effort at Westinghouse Electro-Mechanical Division (WEMD) for 1980.

In the light of your comments and an earlier request from the Director of the Tri-Service Negotiation Staff of the Chief of Naval Material, the DoD Technical Evaluation Group met on 13 March to review the WEMD IR&D projects in question for potential military relevance (PMR). The projects considered in this review were those involving work on pumps, valves, seals, and control rod drive mechanisms as indicated in your memorandum.

The Technical Evaluation Group found that the WEMD project descriptions and accompanying PMR statements, as they stand, do not provide sufficient detail to evaluate fully the Westinghouse position regarding PMR. Consequently, additional information on the WEMD work will be needed in order to assess whether or not the technology advances to be expected from this work have potential military relevance. Accordingly, I have requested that the Technical Evaluation Group meet with the Director of the Tri-Service Negotiation Staff and WEMD representatives on 31 March to elicit the additional information required and to advise me of their findings concerning the potential military relevance of the WEMD projects.

I appreciate your bringing this matter to my attention, and I will inform you promptly when a determination of PMR has been made.

Jim Wade

James P. Wade, Jr.
Acting

cc:
Assistant Secretary of the Navy
(Research, Engineering, and Systems)
Assistant Secretary of the Navy
(Manpower, Reserve Affairs, and Logistics)
Chief of Naval Material
Chief of Naval Research
Commander, Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

23 March 1981

The Honorable Manuel Lujan, Jr.
House of Representatives
Washington, D.C. 20515

Dear Mr. Lujan:

This is in response to your letter dated March 5, 1981 regarding an article that appeared in the February 19, 1981 issue of Nucleonics Week. That article creates the impression that I am trying to establish naval nuclear fuel production and core fabrication under "one roof" at the Department of Energy's (DOE) Savannah River site. You suggest that existing nuclear facilities, specifically General Atomics' San Diego plant, be examined before building a facility from scratch.

The Nucleonics article to which you refer was wrong. The February 26, 1981 issue carried a correction. It points out that the DOE is taking action only to establish a second supplier for naval nuclear fuel. This does not involve replacing naval nuclear fuel or core production activities currently provided by our commercial vendors. Nor does the Savannah River project entail core manufacture.

The Naval Nuclear Propulsion Program is currently dependent on one supplier for the naval nuclear fuel used in production of reactor cores for the Navy's nuclear powered ships. Depending on a single source for this material imposes an unacceptable risk. Development of a second source for naval nuclear fuel, therefore, is a priority effort.

Naval nuclear fuel is unlike fuel used in civilian reactors. This is because the operating requirements for naval reactor cores are vastly different from commercial cores. The chemical process used to manufacture nuclear fuel is also different than that used by civilian fuel manufacturers, including General Atomic. Moreover, the complex nature of the process makes it particularly difficult to apply effectively the same material accountability techniques used in commercial fuel manufacture. In addition to strict safeguard[illegible], specialized production facilities are required. In this regard, the facilities used by General Atomic in manufacturing fuel for its gas-cooled reactor program are not suitable for naval fuel manufacture.

The relatively small volume of business available, the high cost of facilities required, the uncertainty of regulatory requirements, and other problems associated with naval fuel manufacture makes the construction of a new fuel facility unattractive to private firms as a commercial investment. Conversely, it is not desirable from the Government's standpoint to spend public funds in constructing these facilities on contractor sites.

I am convinced that the best alternative for establishing a second source for naval nuclear fuel manufacture is at the DOE Savannah River site where an extensive support structure, including safeguards and security measures, is already in effect because of other defense work. Savannah River is operated for the DOE by DuPont, a company with extensive experience in chemical processes and in handling special nuclear materials.

If, for some reason, the Department of Energy could not construct the fuel factory on a Government site as proposed, the next most logical approach would be to enter into arrangements to have the fuel factory built and operated by one of our two naval core manufacturers who have experience with handling of highly enriched uranium as well as a direct need for this product in their core manufacturing activities.

I trust this is responsive to your inquiry.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
30 March 1981

MEMORANDUM FOR THE CHIEF OF NAVAL RESEARCH

Subj: Independent Research and Development (IR&D) being conducted by Westinghouse Electric Corporation, Electro-Mechanical Division; comments concerning

Encl: (1) NAVSEA comments on Westinghouse Electro-Mechanical Division (WEMD) Independent Research and Development Projects

1. My memorandum to you dated September 3, 1980, provided a technical evaluation of Westinghouse Electric Corporation's 1980 IR&D proposal for Westinghouse Electro-Mechanical Division (WEMD). I pointed out that virtually all of WEMD's Defense work is for the manufacture of reactor coolant pumps for the Naval Reactors Program but that most of WEMD's IR&D projects were directed specifically at improvement of products for commercial nuclear power plants. I recommended that $1.081 million, or about 85% of the specific IR&D projects included in the WEMD proposal, be disallowed as not meeting the statutory test of having "potential military relevance." The Navy strongly supported my recommendations and refused to allow the cost of these projects in negotiations with Westinghouse. I understand that Westinghouse has demanded a review of this issue by the Defense Department - apparently on the belief that Defense Department reviews are largely window dressing and that almost any IR&D project will be accepted.

2. I now have the Westinghouse Electric Corporation's 1981 IR&D proposal for WEMD. As was the case in 1980, most of the projects included in the proposal are directed specifically at improvement of products for commercial nuclear power plants and do not have "potential military relevance". Enclosure (1) contains my detailed comments on the 1981 WEMD proposal. In summary, I recommend that $765,000, or about 85% of WEMD's $902,000 IR&D program, be disallowed.

3. The latest Westinghouse proposal again points out major problems with the review of IR&D proposals. First, my comments on the 1981 Westinghouse IR&D proposal have little to do with the IR&D ceiling that will be established for 1981 since IR&D negotiations for a particular year are initiated before the technical comments on that year's IR&D proposal are received. Your letter to me of January 9, 1981, stated that you have initiated discussions with the other services on resolving this

problem. High priority should be given to synchronizing the IR&D review process and the negotiation of IR&D ceilings.

4. Another problem with IR&D is the possibility that research programs being conducted and charged to the government as IR&D will overlap research and development work being conducted at government laboratories or other laboratories at government expense. You have indicated that increased emphasis will be placed on avoiding this problem. I would be interested in understanding what specifically can be done to ensure contractors do not receive IR&D funding for research and development work being conducted elsewhere at government expense.

5. A third problem is that the government does not conduct a detailed evaluation of the estimated cost of IR&D projects. IR&D proposals generally do not disclose the cost or pricing data used by companies in preparing their IR&D estimates. For those IR&D projects determined to have potential military relevance, the government should conduct a detailed evaluation of estimated labor and material costs similar to existing cost analysis procedures for negotiated procurements.

6. A fourth problem is the lack of adequate surveillance over IR&D costs incurred. Government auditors usually verify that IR&D costs billed to the government do not exceed the government's share of the IR&D ceiling. However, I am not aware of any checks made to ensure costs were incurred on the IR&D projects accepted by the government as having potential military relevance. Action is required in this area to ensure the government does not reimburse contractors for IR&D costs actually incurred on projects with no potential military relevance.

7. I do not mean to single out Westinghouse for criticism, but the WEMD situation clearly illustrates the potential for abuse in the Defense Department's IR&D system. This potential can only be eliminated through expert technical reviews of proposed IR&D projects and through actions taken by program offices, such as the Office of Naval Research, to improve the system itself. Your letter of January 9, 1981, indicates you have initiated measures to effect such improvements. I would appreciate it if you would keep me informed of your efforts in this area.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy (Research, Engineering & Systems)
Assistant Secretary of the Navy (Manpower, Reserve Affairs & Logistics)
Chief of Naval Material
Commander, Naval Sea Systems Command

NAVSEA COMMENTS ON WESTINGHOUSE ELECTRO-MECHANICAL DIVISION (WEMD) INDEPENDENT RESEARCH AND DEVELOPMENT PROJECTS

Project Number (Cost)	Project Title	Comment
EM-81-1D ($200,000)	Reactor Coolant Pump Development	This project is directed toward improving the performance of the Westinghouse Model 93A reactor coolant pump. This pump is used only in large civilian nuclear power plants and is of a size and type not suitable for military application. Therefore, this project has no military relevance and is not appropriate for IR&D funding.
EM-81-2D ($230,000)	Seal Development	This project is directed toward improving the reliability of shaft seals for reactor coolant pumps. These seals are suitable for use only in large civilian nuclear power plants. There is no military application for this equipment. Therefore, this project is not appropriate for IR&D funding.
EM-81-3D ($220,000)	Valve Development	This project is directed at improvement of WEMD's line of valves for the civilian nuclear industry. WEMD is not a current supplier of valves for military nuclear applications. Therefore, this project is not appropriate for IR&D funding.
EM-81-5D ($45,000)	Product Reliability and Availability	This project is directed toward improving the reliability of WEMD's pumps, valves and control rod drive mechanisms used only in large civilian nuclear power plants. There is no military application for the components addressed by this project. Therefore, this project is not appropriate for IR&D funding.
EM-81-6D ($70,000)	CRDM Development	This project is directed toward improvement of WEMD's control rod drive mechanism line. These

Project Number (Cost)	Project Title	Comment
		mechanisms are designed for, and used exclusively by, the civilian nuclear power industry and are not suitable for military application. Therefore, this project is not appropriate for IR&D funding.

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
8 April 1981

MEMORANDUM FOR THE CHIEF OF NAVAL RESEARCH

Subj: Independent Research and Development (IR&D) being conducted by Westinghouse Electric Corporation, Electro-Mechanical Division

Encl: (1) Draft memorandum from Assistant Secretary of the Navy (Research, Engineering and Systems) to the Under Secretary of Defense for Research and Engineering

1. As you know, the Defense Department's IR&D Technical Evaluation Group recently met to determine the potential military relevance of several IR&D projects proposed by the Westinghouse Electric Corporation, Electro-Mechanical Division (WEMD). The Technical Evaluation Group, over the objections of your representative, ruled that virtually all WEMD's IR&D projects questioned by the Navy had potential military relevance and would therefore be considered allowable as a charge to the government.

2. I consider the Navy should request that the Defense Department review the findings of the Technical Evaluation Group and make a determination that WEMD's IR&D projects have no potential military relevance. I request you bring this issue to the attention of the Assistant Secretary of the Navy (Research, Engineering and Systems) and request his assistance in obtaining a Defense Department review of this matter. In this regard, I have enclosed for your use a draft memorandum to the Under Secretary of Defense for Research and Engineering from the Assistant Secretary of the Navy.

3. I would appreciate being informed of the action you take in this regard.

H. G. Rickover

Copy to:
Chief of Naval Material
Commander, Naval Sea Systems Command

MEMORANDUM FOR THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Subj: Independent Research and Development (IR&D) being conducted by Westinghouse Electric Corporation, Electro-Mechanical Division

Ref: (a) Memorandum to you from ADM H. G. Rickover dated February 24, 1981

1. On March 31, 1981, the special IR&D Technical Evaluation Group that reports to you found that certain IR&D projects of the Westinghouse Electric Corporation's Electro-Mechanical Division (WEMD) have potential military relevance and should be allowed as a charge to the Navy. The purpose of this memorandum is to recommend that you review the findings of the Technical Evaluation Group and determine that these projects do not meet the statutory test of having "a potential relationship to a military function or operation" and should be disallowed.

2. The Navy's concern with IR&D projects proposed by WEMD were identified to you in the reference (a) memorandum which pointed out that:

a. WEMD's work for the Navy constitutes about 35% of the Division's total workload and virtually all of the Division's defense work.

b. The Navy considers that $1.081 of the $1.276 million in IR&D projects proposed by WEMD for 1980 have no potential military relevance since they are directed toward improvement of products for commercial nuclear power plants.

c. Westinghouse refused to delete these items from its IR&D proposals and asked for a formal determination in this regard.

d. The Defense Department scheduled a meeting of a special IR&D Technical Evaluation Group that reports to you to review this matter.

3. The Technical Evaluation Group meeting was held on March 31, 1981, to discuss the potential military relevance of WEMD's IR&D projects. Westinghouse orally presented new information about its IR&D projects which varied substantially from its formal IR&D submittal. In its presentation Westinghouse attempted

to portray WEMD's IR&D projects as having broad technological significance to the Navy rather than narrow application to WEMD's commercial nuclear products as was indicated in the formal submittal.

4. After Westinghouse's departure, the Technical Evaluation Group discussed each of the IR&D projects questioned by the Navy. In all cases, the Navy representative considered the Westinghouse presentation was simply a sales pitch to achieve Government funding of the proposed projects and that the work to be performed had, at best, only incidental relevance to the military. The Air Force representative, for the most part, concurred in the Navy's position. The Army representative, however, took the position that virtually all of the proposed IR&D projects had potential military relevance. The Army representative could cite no direct relevance of WEMD's IR&D projects to the Army but stated that the work might advance military technology at some point in the future and, therefore, should be accepted. The chairman of the Technical Evaluation Group, Dr. Gomota of your office, announced that the Defense Department would be bound by the Army's determination and WEMD's IR&D program would be considered allowable as a charge to the Navy.

5. The procedures used by the Technical Evaluation Group state that "a project deemed relevant by any one of the Military Departments will be considered relevant to the DOD". Presumably this procedure would take care of the case where a project was relevant to the work of one military service, but not to the others. In the WEMD case, however, the Army, without having to justify why the work would be relevant to Army activities, has overriden the Navy's technical determination that the company's IR&D directed at the development of commercial nuclear plants has no potential military relevance. In this regard it is worth noting that the Navy has over 30 years of experience in the development and operation of nuclear power plants. The Army has much less experience in this area and is not involved at all with the work being conducted at WEMD.

6. It is important that government funds, particularly scarce funds for research and development work, be put to the best possible use. The Defense Department is required by law to ensure that its IR&D funds are spent only on projects with potential military relevance. I understand that the WEMD case is the first to be brought to the DOD Technical Evaluation Group for a determination of potential military relevance. If the DOD defers to the Army's contention that any technology may have some future relevance, there is no sense continuing to review proposed IR&D projects for potential military relevance.

7. I strongly recommend that you review the findings of the Technical Evaluation Group and support the Navy's determination that WEMD's IR&D projects do not have potential military relevance and should therefore not be allowed as a charge to the Government. I further recommend that the procedures followed by the Technical Evaluation Group be revised to require a majority vote of the members to override a single member's determination that a proposed IR&D project does not have potential military relevance.

8. I would appreciate being advised of your decision in this matter.

Assistant Secretary of the Navy
(Research, Engineering and Systems)

Copy to:
Assistant Secretary of the Navy
(Manpower, Reserve Affairs, and Logistics)
Chief of Naval Material
Chief of Naval Research
Commander, Naval Sea Systems Command
Deputy Commander, Nuclear Propulsion Directorate,
Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

9 April 1981

The Honorable Samuel S. Stratton
Chairman, Subcommittee on Procurement
and Military Nuclear Systems
Committee on Armed Services
House of Representatives
Washington, D.C. 20515

Dear Mr. Stratton:

This is in reply to your letter of February 25, 1981 requesting examples of contracts completed in the last five years on which I believe excessive profits have been made. In that letter you also stated that your Subcommittee may soon be holding hearings concerning profit limitations on defense contracts. It is my opinion that there is a compelling need for legislation which will ensure that defense contractors are not allowed to be paid, or to retain, excessive profits.

Contrary to what defense contractor lobbyists contend, defense procurement regulations do not of themselves provide adequate means to avoid excessive profits on defense contracts. However, because the Department of Defense in many cases does not have access to the data needed to identify excessive profits, it is difficult to cite specific examples.

The Department of Defense, for example, does not maintain records of subcontractor profits, yet the potential for overcharging at this level is high. Prime contractors who are not under heavy competitive pressure have little incentive to shop for the lowest price. In fact, since profit is negotiated as a percentage of cost, high subcontract prices can provide higher profits to him.

There also is a tendency at the subcontract level to circumvent the requirements of the Truth in Negotiations Act and other procurement safeguards. Since the requirements for submission of subcontractor cost and pricing data do not apply to competitive procurements, receipt of more than one bid by the prime contractor is frequently determined to be "adequate competition" regardless of circumstances. For example, for certain types of steel, manufacturers have for many years bid against one another on a basis that, when transportation costs from the different steel mills to the contractor's site are added to the bids, the total price is the same no matter which steel company is selected. This method of pricing, which results in identical bids, has been construed by some prime contractors to represent competitive bidding, as have other situations where several distributors of one manufacturer's product submit identical quotes.

92-784 O - 82 - 15

Historically, the forging industry has also been a trouble spot. The industry has a long tradition of refusing to provide cost and pricing data for sole source procurements. Competitive bidding avoids the requirements for cost and pricing data. But competition in this industry is illusory, because the supplier who wins the first order frequently has a substantial advantage over his competitors. In subsequent procurements the competitors' prices must include the one-time charges for forging dies which the first supplier already possesses.

In other cases sole source suppliers evade cost or pricing data requirements by contending that their prices — even for specialty materials — are "based on catalogue price" — another condition that exempts the procurement from the cost and pricing data disclosure requirements of the Truth in Negotiations Act. The International Nickel Company, for example, has never provided cost and pricing data under the Truth in Negotiations Act, even though it has a virtual monopoly on certain nickel based alloys used in defense work. In another instance, Cabot Corporation — the sole source of a special material used in large naval reactor valves — refused to submit required cost and pricing data by claiming "catalogue price." The company later acquiesced and submitted the data after contract award. Review of the data by the Government disclosed that the profit quoted by the contractor was 66 percent of estimated cost.

Even when the subcontractor provides cost or pricing data prior to contract award, excess profits are not always avoided. Profit figures can be understated by inflating cost estimates. Information disclosed during litigation with Curtiss-Wright, for example, revealed that the company may have prepared two estimates in support of their price — one they provided for audit under the Truth in Negotiations Act and the other based on the amount they actually thought was required to do the job.

Some sole source subcontractors use a less subtle approach to obtain high profits. The subcontractor submits all required cost and pricing data, but openly insists on being paid high profits. For example, U.S. Steel — the company that manufactures high pressure air flasks for the TRIDENT submarines — has been able to insist on a profit of between 27-38 percent of estimated cost. In another instance, Carborundum — the sole source supplier of material used in the fabrication of reactor cores — has historically demanded a profit of 25 percent. With no alternative sources for the material and not enough business to develop and support a second source, the Government has little or no leverage for negotiating the profit downward.

In contrast with the subcontract situations, major Department of Defense prime contractors generally provide cost and pricing data which can be reviewed by defense auditors prior to price negotiations.

This cost data, however, can be inflated with contingencies, identified or unidentified, which represent the opinion of the contractor and are not capable of being audited. If the contractor is in a sole source position, the Government may have no leverage to negotiate unjustified contingencies out of the contractor's price.

An excellent example of the above is the contingency Newport News recently began adding to price proposals, supposedly to take into account a projected workforce inefficiency due to an increase in its submarine overhaul workload. The Government repeatedly requested information to justify the numbers used in arriving at the company's estimate such as the need for new hires, the duration of inefficiency, and the basis of the "inefficiency factor" applied. The contractor refused to provide any supporting data. Eventually the Navy had to include the additional $1.5 million in the price of the first of the submarine overhaul contracts without ever having seen any justification for the additional manhours. Similarly, during negotiations for the CVN 71, Newport News proposed over 2 million manhours more than the company was then projecting as necessary for the construction of the CVN 70. The only justification was an expected inefficiency due to a "younger workforce." These higher estimates were made despite that the CVN 71 was the fourth ship in the class built by this shipyard, with only minor differences in specifications between the ships. Although the Navy strongly disagreed with the estimate, there was no alternative source for construction of this ship and the contract price included the effect of the additional manhours.

On cost-type contracts and on fixed price incentive contracts, the Department of Defense can easily determine the actual profits realized. This is because the contracts themselves provide that, subject to the ceiling price in fixed price type contracts, the Government must pay incurred costs plus either a fixed fee or an incentive fee based on performance. Under incentive contracts, the contractor gets a higher profit if he holds costs down. Defense contractor lobbyists, no doubt, would contend that any profits realized under incentive contracts or fixed price contracts represent rewards for good performance and therefore cannot be excessive.

The fallacy in this argument is that there are ways, other than cost reduction, to gain a higher incentive profit. Specifically, in negotiating contracts or contract changes a contractor may be able to inflate prices so that normal performance will show up as a substantial underrun. Underruns for these reasons are rewarded as handsomely as cost reductions resulting from increased efficiency. Since the Government has little or no leverage in price negotiations with sole source contractors, a contractor may make a high profit through price negotiations and claims more easily than by reducing the cost of contract performance. Here are examples from a very profitable shipyard.

Enclosure (1) lists the last six submarine overhaul contracts completed by Newport News. These are sole source, cost-plus-incentive-fee contracts under which the Navy negotiates the estimated target cost for the work with Newport News with a target profit equal to about 10 percent of the target cost. To provide the contractor an incentive to reduce costs, the Navy agreed that, to the extent Newport News spends less than the target cost, the company will receive in additional profits 30-40 percent of the cost savings. In this regard it is important to note that 10 percent of estimated cost is currently the maximum fee authorized by law for cost plus fixed fee contracts; it is also the maximum fee listed in the Defense Acquisition Regulation for cost plus incentive fee contracts. It requires a waiver of procurement regulations to allow this incentive fee arrangement which provides the opportunity for higher profits – permitting the contractor to earn a profit up to 15 percent of negotiated target cost.

Enclosure (1) shows that Newport News has been making far more than the 10 percent target fee. For the past six submarine overhaul contracts, Newport News has received an average 17.6 percent profit as a percentage of actual costs. Profits on individual contracts have ranged from 15 to as high as 21 percent. Since the work is performed under cost reimbursement contracts, the contractor is guaranteed recovery of all his costs and is not subject to any financial risk for performing these contracts. Yet the profits being realized under the contracts are higher than those normally associated with higher risk, fixed price contracts.

During the course of every overhaul, additional work arises for which the Navy and Newport News negotiate contract changes and increase the target cost and fee. Upon completion of the contract the Navy compares Newport News' actual costs of performance with the adjusted target cost of the contract and, if actual costs are less than the target, pays the appropriate incentive fee. It is interesting to note from Enclosure (1) that the final incurred costs on these contracts, without exception, are but a few million dollars away from the original negotiated cost for the overhaul – before any increase for changes. This suggests that the underruns for which the company is being paid so generously may be the result of aggressive negotiation by the contractor rather than sound management and improved productivity.

On recent sole source, firm fixed price contracts for post-shakedown availabilities of new construction submarines, Newport News has realized profits ranging from 9 to 36 percent of incurred costs. Enclosure (2) shows that on the average Newport News has realized a profit of 21 percent of incurred cost. On these contracts, an average of 30 percent of the final price represents the price of contract changes which were negotiated after the ship had left the yard and the contractor had incurred almost all his costs. Under the circumstances, it appears that the high profits resulted more from price negotiations than from cost reductions

during contract performance. The ability to negotiate price after the work is completed and the repetitive nature of this work greatly reduces any financial risk the contractor might have.

One cannot simply look at the profit as a percentage of cost and conclude whether or not excessive profits exist. A five percent profit might be very low for some work, yet excessively high in contracts which involve low risk, negligible contractor investment, or have large portions of the work subcontracted. There are indicators more representative of a successful business operation than profit expressed as a percentage of either cost or sales. One commonly used is return on investment.

Return on investment helps put the profit picture into perspective. In effect it tells what rate of return is being realized for the dollars invested. The foregoing example regarding submarine overhaul contracts illustrates the significance of looking at return on investment in evaluating profits. In its financial reports to stockholders, Tenneco — the parent corporation for Newport News — ranks the performance of its various divisions and subsidiaries based on return on net assets employed — one way of calculating return on investment. The recent report for 1980 showed that Newport News had in one year moved to near the top of the ranking of Tenneco divisions. The return on net assets for Newport News was 18 percent for 1980. This was exceeded only by the historically profitable oil and natural gas pipeline divisions, which reported a 25 percent and 20 percent return on net assets, respectively.

Although the Defense Department does not for the most part evaluate return on investment, it is possible at Newport News to approximate the company's return on Navy overhaul contracts. This is because Newport News, in order to receive payments from the Defense Department for cost of facility capital employed, allocates its assets to various product lines. Using this data, Newport News received approximately a 27 percent return on investment for these risk-free, cost type Navy overhaul contracts in 1980, despite the company's large investment in new dry docks to perform this work. For cost type design contracts where the Navy has been paying a fee of about 8 percent as a percentage of cost, the return on investment to Newport News in 1980 was about 34 percent.

In addition to examining profit as a percentage of cost and return on investment, other factors such as risk, investment, and profit levels being realized on comparable non-defense work must also be considered when screening for excessive profits. Moreover, profits should be evaluated by individual contractor and by product line. Otherwise contractors can hide excessive profits on sole source or non-competitive contracts in their overall averages.

To identify excessive profits a judgement needs to be rendered by knowledgeable persons who have access to the necessary information.

In cases where it is determined that excessive profits exist, the Government must have the right to recoup them.

In the current climate of increasing defense expenditures in areas such as shipbuilding, where industrial capacity is limited, it is unrealistic to presume that true competition exists; or, in cases where there is more than one supplier, that competition can be relied upon to protect the U.S. against excessive profits.

The examples cited above illustrate why I consider we need profit limiting legislation. If I can be of further assistance, please let me know.

Sincerely,

H. G. Rickover

H. G. Rickover

Enclosures
(1) Fee on Completed Submarine Overhauls
(2) Profit Earned by Newport News on SSN 688 Class Post-Shakedown Availabilities

FEE ON COMPLETED SUBMARINE OVERHAULS
($ Millions)

Ship	Completed	Original Contract Target Cost	Final Contract Target Cost	Final Incurred Cost	Fee	Original Contract Fee (%)	Fee ÷ Final Incurred Cost (%)
SSBN 622	May 1977	$44.5	$57.7	$48.0	$8.7	9.6	18.1
SSN 661	Oct. 1977	29.7	39.2	30.2	5.9	9.8	19.5
SSN 663	Apr. 1978	32.9	41.0	28.6	6.1	9.8	21.3
SSBN 631	Feb. 1979	45.3	52.8	44.7	7.5	9.7	16.8*
SSN 668	July 1979	33.1	39.5	34.7	5.1	9.8	14.7*
SSN 670	Dec. 1979	34.0	40.4	35.5	5.4	9.8	15.2*

* Newport News also received payments on these overhauls for Cost of Facilities Capital. If these payments are considered an additional return to the contractor, the above figures would increase to 18.6% (SSBN 631), 17.0% (SSN 668), and 18.0% (SSN 670).

Enclosure (1)

PROFIT EARNED BY NEWPORT NEWS ON SSN 688
CLASS SUBMARINE POST-SHAKEDOWN AVAILABILITIES (PSA's)
(Thousands of Dollars)

Submarine	Fixed Price	Costs Incurred	Profit	Profit as % of Cost
688	$ 6,072	$ 5,318	$ 755	14.2
689	6,387	5,814	573	9.9
690	6,726	5,162	1,564	30.3
691	7,210	5,287	1,922	36.4
693	5,126	4,199	927	22.1
694	5,523	4,330	1,194	27.6
695	5,508	5,045	462	9.2
Total	$ 42,552	$ 35,155	$7,397	21.0

Note: Numbers may not check due to rounding

Enclosure (2)

Department of Energy
Washington, D.C. 20585

24 APR 1981

The Honorable Pete V. Domenici
Chairman, Subcommittee on Energy Research
and Development
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

Dear Senator Domenici:

This is in reply to your letter of April 10, 1981 in which you asked questions concerning the Water Cooled Breeder Program. Attachment I provides my response. In addition, there are several points that are germane to the Subcommittee's consideration of the Water Cooled Breeder Program as an energy option.

The Liquid Metal Fast Breeder Reactor is the primary DOE nuclear breeder program because of its theoretical breeding potential. The light water breeder I am currently working on does not have the breeding potential of the liquid metal breeder. However, it has the advantage of being based on the proven light water reactor power plant technology that has been in use world-wide for 25 years. Due to the seriousness of the Nation's future energy situation, it is only prudent to continue development of the light water breeder as a nuclear power option.

As you are aware, the General Accounting Office (GAO) recently issued a report entitled, "The Department of Energy's Water Cooled Breeder Program - Should It Continue?" The GAO's sole technical recommendation was to "discontinue reactor operation at Shippingport by January 1982 and initiate the proof-of-breeding experiment at that time." Based on my engineering experience, this would be a mistake. The light water breeder reactor has been operating well in the Shippingport Atomic Power Station for over three years supplying commercial electric power and is capable of several more years of operation. The best way to obtain data that will be needed to aid in making decisions concerning possible application of light water breeder technology is to continue to operate the Shippingport reactor. Continued operation will provide valuable information on the interaction of fuel elements and core structure, and on the nuclear, thermal and hydraulic performance of a power reactor, none of which can be provided by other means.

In my opinion, no breeder concept will be chosen for use until national policy issues concerning fuel reprocessing and radioactive waste disposal are resolved and most likely not until experience with the Clinch River liquid metal breeder demonstration plant is in hand. Operation of the Shippingport light water breeder for several more

years as presently planned will still result in breeding performance data being available when the Clinch River plant is scheduled to begin operation in 1990. Attachment II expands on my reasons for disagreeing with the GAO report.

The House Subcommittee on Energy Research and Production has questioned the Advanced Water Breeder Applications portion of the Water Cooled Breeder program as not worthwhile. I disagree. The technol- y embodied in the Shippingport light water breeder is a decade old. Important data from the operation of the Shippingport plant and other advancements in light water reactor technology are being developed and documented for future use. The focus of the breeder applications effort is on exploring technical problems, and on developing and disseminating technical information needed for commercial scale application of light water breeders through published technical reports.

Doing this work in parallel with operation of the Shippingport plant and the end-of-life examinations of the Shippingport light water breeder core will save years of necessary development effort. If at some point in time the light water breeder technology is needed, this time savings could be critical. In addition, by using the people who have had first hand experience in developing the Shippingport core and are the best qualified to perform this work, it will be cheaper to develop this information now.

Breeder application work is underway in the important technical areas of core and fuel element design, and fabrication development which is expected to improve breeding performance and simplify fuel manufacture. This work involves considerable irradiation testing which is time constrained and not susceptible to acceleration. Therefore, any delays in accomplishing the breeder applications work will have a direct effect on the availability of technical data to implement light water breeder technology.

In summary, the Water Cooled Breeder program is an important energy alternative that is well along in development and testing. I would appreciate very much your full support for continuing the program at the funding level requested by the Administration.

Prior to your subcommittee hearing on April 1, 1981, the Acting Subcommittee Chairman, Senator Nickles, mentioned that there would be a full committee hearing on the breeder programs and that I should present my testimony on the Water Cooled Breeder program at that time. I look forward to testifying to the full committee on this subject.

Sincerely,

H. G. Rickover

H.G. Rickover

Attachments

ATTACHMENT I

RESPONSE TO SENATE ENERGY COMMITTEE QUESTIONS

Questions for Admiral Hyman G. Rickover - from Transcript of Proceedings

In your testimony before the Committee you stated:

> "We can continue operating the Shippingport light water breeder and have the results of what we can get out of the light water breeder just about the time a liquid metal breeder plant will start operating."

Question 1:

What applicability do you believe the results of your light water breeder program can have to today's operating light water reactors?

Answer:

Much of the technology being developed and demonstrated in the light water breeder program has potential application to today's operating light water reactors. This includes technology in the areas of reactor physics and thermal, hydraulic, fuel cladding, and fuel element design and analysis. This technology can be applied to permit more efficient use of nuclear fuel in light water reactors.

Question 2:

Is it possible to convert existing reactors to light water breeders? If so, would it necessitate a de-rating of the plant and a resultant reduction in electric power output?

Answer:

Yes. The light water breeder core was successfully backfit in 1977 into the Shippingport Atomic Power Station reactor which had been operating as an ordinary light water reactor since 1957. However, converting an existing reactor to a light water breeder would require de-rating of electric power output. This is because breeding in a light water reactor requires a reactor core with higher metal to water content and lower power density than today's commercial light water reactors. As a consequence, a light water breeder core designed for a given power output would require a larger reactor vessel and more powerful reactor coolant pumps than the non-breeding light water reactors being used commercially today. A utility interested in applying light water breeders would logically build new plants specifically designed with a larger reactor vessel and more powerful pumps for its breeder reactors to replace or expand its generating capacity.

If existing reactors are converted, they most likely would be converted to "prebreeders". Prebreeder reactors fueled with available fissile fuel, such as uranium-235, would be necessary to irradiate thorium for producing uranium-233 to fuel the initial light water breeder cores. As part of the Advanced Water Breeder Applications subprogram, Naval Reactors has developed and published conceptual designs of prebreeder cores that could be backfit in existing light water reactors without reducing electric power output.

Question 3:

If a light water breeder were to be designed "from scratch", approximately how long would it take to design, develop and begin operation of such a plant?

Answer:

Development of the Shippingport light water breeder reactor core took eight years from authorization to operation in an existing plant. Except for the core and associated components, the remainder of the plant, built in the 1950's, is a pressurized light water reactor plant. A conceptual design of a commercial scale light water breeder is being developed based on the technology being proven by operation of the Shippingport light water breeder reactor. With that conceptual design as a starting point, it should take no longer for industry to build a commercial light water breeder power plant than it would take to build a typical light water reactor power plant. This assumes generic issues applicable to building any breeder such as fuel reprocessing, recycled fuel fabrication and radioactive waste disposal are resolved.

Question 4:

What is the maximum theoretical breeding ratio and doubling time you calculate for an LWBR core - what is the impact of reprocessing losses on the "overall system breeding ratio and doubling time?"

Answer:

The maximum theoretical breeding ratio for an LWBR core is estimated to be about 1.15 at the beginning of core life. However, the breeding ratio is reduced with lifetime as fission products build up. Consequently, a light water breeder is expected to be capable of providing at each refueling enough fissile fuel to manufacture a replacement fuel loading without having to mine more uranium, taking into consideration the 1% losses assumed in recycling the fuel. An LWBR core is not expected to produce enough extra fissile fuel to start up additional reactors, thus it is not predicted to "double".

Question 5:

What is the burnup level that the LWBR was originally targeted to achieve in the original project proposal? What burnup level has currently been achieved? What burnup level do you ultimately hope to demonstrate by the completion of the program?

Answer:

When this development project originally started no one could accurately predict the burnup which would be possible. As the technology development progressed to the point of designing the Shippingport light water breeder, Naval Reactors predicted that, as a minimum, the reactor would be capable of generating 50 net megawatts of electricity for at least 15,000 effective full power

hours, or 750,000 net megawatt-hours of electrical energy. As the reactor design and manufacture progressed, Naval Reactors concluded it would be possible to uprate the reactor to 60 megawatts of net electrical output. The reactor surpassed the original energy output prediction in October 1979. To date, the Shippingport light water breeder has produced more than 1,200,000 net megawatt-hours of electrical energy. Currently, it appears possible the core may be able to generate more than 1,800,000 net megawatt-hours of electrical energy while still operating as a breeder, more than twice the original energy output prediction. The peak fuel burnup associated with this energy output is about 65,000 megawatt days per metric ton of heavy metal.

ATTACHMENT II

COMMENTS ON GAO REPORT
"THE DEPARTMENT OF ENERGY'S WATER COOLED
BREEDER PROGRAM-SHOULD IT CONTINUE?"
EMD 81-46

GAO Recommendation

Discontinue reactor operation at Shippingport by January 1982 and initiate the proof-of-breeding experiment at that time.

Naval Reactors Comment

Naval Reactors (NR) does not agree with the GAO recommendation which is based on an incomplete understanding of light water breeder technology.

The concept being developed under the Water Cooled Breeder program is a self-sustaining breeder reactor cooled and moderated with light (ordinary) water and fueled with uranium-233 and thorium. The light water breeder reactor appears to be a technical success. A light water breeder reactor, believed 20 years ago to be technologically impossible, is operating today in the Shippingport Atomic Power Station and has accumulated over 21,000 Effective Full Power Hours of operation. The technology embodied in this breeder opens up for use an energy resource, thorium that could potentially provide enough energy to meet this Nation's projected requirements for electricity generation for hundreds of years in the future.

The GAO contends NR has changed the objective of the program by extending operation of the Shippingport light water breeder to emphasize fuel performance rather than breeding determination. In addition, the GAO concludes that breeding in the light water breeder must be proved now so that industry can evaluate this technology for application at the earliest possible date.

The primary objective of the Water Cooled Breeder program has always been to develop water cooled reactors with as high fuel utilization as practical. The original minimum lifetime design objective of 15,000 to 18,000 Effective Full Power Hours for the Shippingport light water breeder was set during the core development phase and was based on the then state-of-the-art technology. Through the incorporation of technology advances that evolved during the development effort and based on operating experience to date, the core is considered to have significantly longer lifetime capability while still meeting the original breeding prediction. Reactor performance measurements confirm that the Shippingport light water breeder core is performing well.

The decision to continue operation of the light water breeder core beyond the original minimum design objective was made to obtain valuable technical data. Further operation provides an economical opportunity to realize the full technical worth of the light water breeder core and to better demonstrate the technology of the uranium-233 and thorium fuel system. Important technical information will be generated for evaluating the future potential of light water breeders and for applying and exploiting this technology with minimum wasted effort and costs. This information will also aid in determining how to more efficiently

use nuclear fuel resources in light water reactors. NR notes that the companies involved in design of present light water reactors all have programs to extend fuel utilization.

The GAO contention that breeding must be confirmed quickly does not take into consideration the fact that no breeder concept will be chosen for use by industry until national policy issues concerning fuel reprocessing and radioactive waste disposal are resolved and probably not until experience with the Clinch River liquid metal breeder demonstration plant is in hand. Operation of the Shippingport light water breeder as presently planned will result in breeding performance data being available when the Clinch River plant is scheduled to begin operation in 1990.

The GAO believes that technical data on the uranium-233 and thorium fuel system can be obtained through the use of a test reactor. GAO also states the fuel system could be further tested in a subsequent larger demonstration plant.

NR believes that complete technical data about the reactor concept will be needed to make decisions on whether or not to use the light water breeder technology. The cheapest and most effective way to obtain the data is to continue operation of the Shippingport light water breeder which is the only power reactor fueled with uranium-233 and thorium ever to be operated anywhere in the world.

If data from test reactors were equivalent to actual experience, as the General Accounting Office suggests, NR would terminate operation of the Shippingport plant. However, it is not true. By operating an actual power reactor core under typical utility service conditions, data can be obtained that is not obtainable from irradiation tests, i.e. data on the interaction of fuel elements and core structure and information on the nuclear, thermal, and hydraulic performance of a reactor. Furthermore, operation of the Shippingport plant and the related breeder application effort is fully demonstrating the light water breeder technology and there is no need for a costly, federally financed, large commercial demonstration plant.

GAO Recommendation

Establish fixed milestones and cost projections for all major activities so that (1) the performance of the program can be better measured, (2) accountability over achieving critical steps in the development process can be better established, and (3) Congressional oversight over program progress can be improved.

Naval Reactors Comment

NR has effective milestones and cost projections for the Water Cooled Breeder program. The evolving nature of a research and development effort must be borne in mind when evaluating cost and schedule projections. Inherent in any research and development program is a process of learning and evolution wherein each step of the development effort can potentially result in following a new, previously unexpected path to successful completion. The Water Cooled Breeder program is no exception. This program has been managed, since its inception, to maximize the technical value of the effort. The cost projections and schedules are adjusted when necessary to reflect the current state

of knowledge in this very complex technical work.

The GAO expresses concern in its report because the program milestones are footnoted to indicate that their occurrence on the scheduled dates are dependent on the operating life of the Shippingport plant. This is a logical qualification since the operation of the Shippingport plant is the key factor in the timing of the program. NR has taken the technically conservative approach of extending the operating life of the plant in steps based on analysis of actual reactor performance.

Naval Reactors manages the Water Cooled Breeder program the same way it manages the Naval Nuclear Propulsion Program -- by exercising strong technical and fiscal control over its work with great attention to detail. The Naval Nuclear Propulsion Program is responsible for the design, development, and operation of the Navy's nuclear powered fleet and, in addition, is currently responsible for 158 operating reactors -- more operating reactors than the total of all U.S. civilian nuclear power reactors. In carrying out these programs, management is exercised effectively through strong day-to-day involvement and periodic reviews of technical plans and associated cost projections.

GAO Recommendation

Transfer responsibility for any further development of the water cooled breeder to the Deputy Assistant Secretary for Nuclear Reactor Programs if such development is warranted.

Naval Reactors Comment

The GAO recommendation makes a flat statement that responsibility for the Water Cooled Breeder should be transferred within the Department of Energy. However, in the body of the report GAO states that responsibility for the program "...should be shifted after the proof-of-breeding experiment is complete and a decision is made to further develop and demonstrate the water cooled breeder's commercial potential ...". Based on this qualification, NR does not take issue with GAO's recommendation to transfer responsibility for commercialization of the light water breeder at a future date.

The Water Cooled Breeder program is an important part of the DOE's energy research and development effort. This program is being carried out by NR as a logical outgrowth of previous Naval Reactors civilian nuclear power development work and because of NR's extensive experience in developing water cooled reactors for the Navy's nuclear powered warships.

Naval Reactors Summary

The GAO report notes that NR views the Water Cooled Breeder program as a development effort, while GAO views the controlling aspect of the program to be the necessity to quickly prove breeding. This is an accurate description of NR's view. This energy option is being pursued because of the vast energy potential embodied in the light water breeder technology without the need to develop an entirely new power plant technology. A thorough evaluation of the full core performance capabilities, including a determination of breeding, is essential in fully evaluating the uranium-233 and thorium fuel system. The proof-of-

breeding is only one aspect of the Water Cooled Breeder program, and, contrary to the GAO contention, is certainly not the only technical consideration. NR plans to operate the Shippingport light water breeder to provide maximum technical data in the event that application of this option is necessary to meet the Nation's future energy requirements. This approach is the most effective from both a technical and cost standpoint.

92-784 O - 82 - 16

Department of Energy
Washington, D.C. 20585

April 30, 1981

The Honorable Samuel S. Stratton
Chairman, Subcommittee on Procurement
and Military Nuclear Systems
Committee on Armed Services
House of Representatives
Washington, D.C. 20515

Dear Mr. Stratton:

I have received a copy of a letter dated April 9, 1981 from Mr. Agnew of the General Atomics Company to Congressman Lujan concerning the capability of General Atomics for producing naval nuclear fuel. Since the House Armed Services Committee is currently reviewing my request for initial funds for a naval nuclear fuel facility, I thought it appropriate to provide you my comments. A copy of Mr. Agnew's letter is attached.

As you know, Nuclear Fuel Services (NFS) is currently the only supplier of the naval nuclear fuel used in production of reactor cores. Strikes, operational or regulatory shutdowns, natural disasters or other unanticipated problems can therefore jeopardize our fuel supplies. The reactor cores are required for nuclear powered warships that constitute over 40 percent of the Navy's combatant fleet. Consequently, there is a real and immediate need to develop a second fuel source.

I have explored various alternatives in the Government and private sectors for establishing a second source. NFS was not interested in putting up another plant at a different location. Proposals were then solicited from our two core manufacturers each of which is technically knowledgeable of the process and has a vested interest in ensuring an uninterrupted fuel supply.

Negotiations with the core manufacturers made it clear that the uncertain volume of business, high investment and regulatory concerns would require the Government to put up the funds for the fuel facility. Thus, the Government would be left in the difficult and unattractive position of having a Government-funded facility controlled by a contractor.

It is clear from these negotiations that a fuel facility would not be commercially attractive except on terms where the Government puts up the money and assumes all risks. Under these circumstances it is more advantageous to establish a naval nuclear fuel facility at the DOE's Savannah River Site. This offers the advantage of direct

Government control for this highly demanding product; the ability to accommodate fluctuating production levels; the certainty of a reliable long term source of supply; and a location on the East coast where the core manufacturing facilities are located. The Savannah River Site operating contractor, duPont, is a proven and substantial company with an excellent technical reputation and experience in building and operating chemical facilities and handling highly enriched nuclear fuel.

If for some reason establishment of a fuel factory at a Government site is not possible, I would advocate locating the fuel facility at one of the naval core manufacturers. These suppliers have a proven record, are experienced with naval nuclear fuel, and have a need for the product. However, this arrangement would not be as advantageous to the Government as a facility at the Savannah River Site.

In short, there is nothing in Mr. Agnew's letter that changes my appraisal of the naval nuclear fuel situation or the alternatives noted above. General Atomics does not produce the same type of fuel as used in the Naval Nuclear Propulsion Program - there are substantial technical differences both in the product and the process. General Atomics has little of the necessary equipment. It is located far from the user facilities. It is partially-owned by a foreign company and is of questionable stability as a long term supplier to fulfill a major defense need.

Sincerely,

H. G. Rickover

H.G. Rickover
Deputy Assistant Secretary
for Naval Reactors

GENERAL ATOMIC COMPANY
P.O. BOX 81608
SAN DIEGO, CALIFORNIA 92138
(714) 455-2080

HAROLD M. AGNEW
President

April 9, 1981

The Honorable Manuel Lujan, Jr.
House of Representatives
Congress of the United States
Washington, D. C. 20515

Dear Manuel,

Thanks for sending me the response you received from Admiral Rickover. I have tried to interest the Admiral in our capabilities but to no avail. Once through the efforts of Ed Bauser (Mel Price's staff) I got through to him but his only words were, "Agnew, I don't need your help."

At some risk of still trying to be helpful, let me comment on the Admiral's March 23, 1981 letter and restate the advantages to the U.S. Government as we see them of General Atomic Company's serving as a supplier of fuel starting material for the Naval Nuclear Propulsion Program.

The starting material for Naval fuel cores is called "item fuel" and is made from fully enriched uranium. This "item fuel" is currently being produced by Nuclear Fuel Services, the sole supplier of such material. The "item fuel" is then furnished to the two current fabricators of Naval reactor cores, United Nuclear Corporation and Babcock & Wilcox. Due to prolonged difficulties relating to the NFS production of "item fuel", Admiral Rickover has for several years been interested in establishing a second source of supply for this critical material.

General Atomic's interest has been specific to establishing the capability to provide "item fuel". As you may know for the past twenty years we have been producing high temperature gas cooled reactor (HTGR) fuel for the Peach Bottom and Fort St. Vrain reactors. This fuel has, as a starting material, highly enriched uranium in a form similar to that of "item fuel". Admiral Rickover's statement that Naval nuclear fuel is unlike fuel used in civilian reactors, while true in the broad sense, is not accurate relative to Navy "item fuel" and starting material for HTGR fuel. The fuel form required as the starting material for Naval Reactor cores is very similar to that routinely produced by General Atomic Company for the HTGR systems.

The statement that "the complex nature of the process makes it particularly difficult to apply effectively the same material accountability techniques used in commercial fuel manufacture" is also incorrect insofar as General Atomic operations are concerned. The material accountability that would be required for Navy "item fuel" is in fact simpler than that routinely and successfully applied by General Atomic for our highly enriched HTGR fuel. There are differences in public disclosure requirements for NRC licensed facilities as against DOE in-house facilities and we can understand the Admiral's legitimate motivation to minimize this sort of thing for a critical part of the nuclear fleet's fuel cycle.

The General Atomic facilities are quite suitable however for "item fuel" manufacture, in that we routinely process highly enriched uranium, we have full NRC safeguards and are equipped administratively and physically to handle work of a classified nature. General Atomic Company has a DOE facility clearance, has numerous DOE "Q" cleared employees and is certified and equipped to handle classified work both of a software and hardware nature. There is considerable excess capacity and floor space in our NRC upgraded facility for handling this fuel and we think it would be in the economic interest of the government to take advantage of an existing facility rather than "start from scratch" in establishing a new facility. To do the work at GA would require the installation of additional process equipment but no additional buildings or utility load to our existing facility. We estimate the cost at several millions of dollars as against upwards of a hundred million dollars for a new facility.

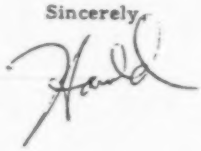
Finally, Admiral Rickover states that in the event the Department of Energy cannot construct the "item fuel" factory on a government site as he proposes, the next most logical approach would be to have the existing core manufacturers "who have experience with highly enriched uranium" establish these facilities. We are convinced that General Atomic's considerable experience with the processing of highly enriched uranium is at least as relevant to the production of "item fuel" as that of either of the current core manufacturers.

I hope this information will clarify the record. Admiral Rickover's desire to have redundancy in his basic fuel work is well founded. I think it would be prudent to have two suppliers of "item fuel" so that critical production could be maintained in the event of a disaster at one of the facilities. You remember the problems which arose after the Rocky Flats fire. GA could provide such an option at minimum cost to the government. The contractor at Irwin, Tennessee has had serious problems and one is led to believe that had it not been for the Admiral's personal intervention with the NRC they would have withdrawn the facility's license because of serious material accountability problems in the past. I suspect the Admiral's desire to produce the fuel in a government facility is aimed in part at least at obviating any similar licensing problems in the future.

But clearly we are not privy to all the considerations that may go into the final resolution of this matter. If the decision is made to go in-house for "item fuel" with no redundancy in a licensed facility we still think we could provide valuable assistance to the contractor in the design and engineering of the new facility and we'd like to get an opportunity to do so.

Any help you can offer to allow us to demonstrate our capabilities, to save the taxpayers money and to contribute to the naval program should be to everyone's advantage.

Sincerely,



DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

1 May 1981

MEMORANDUM FOR THE CHIEF OF NAVAL OPERATIONS

Subj: Naval Nuclear Propulsion Program

Encl: (1) Notes on the Naval Nuclear Propulsion Program

1. Enclosure (1) are notes that I left with the Secretary of the Navy during my meeting with him today.

H. G. Rickover

Copy to:
Chief of Naval Material
Commander, Naval Sea Systems Command

May 1, 1981

NOTES ON THE NAVAL NUCLEAR PROPULSION PROGRAM

1. The Naval Nuclear Propulsion Program currently has 157 nuclear reactors in operation. In the almost 30 years since the operation of the first land-based prototype there has never been a serious incident involving any Naval nuclear reactor plant.

2. A major part of my Department of Energy responsibility is to assure the safe operation of Naval reactor plants; this includes the selection, qualification and training of operating personnel as a joint effort with the Navy.

3. I currently get from the Department of Energy about $400 million of research and development money to support this program as compared to only about $100 million from the Navy. In addition the Department of Energy pays for the eight operating prototypes that we use to train Navy crews.

4. I will continue to make every effort to see that our nuclear reactors do not become for the Navy the kind of problem that Three Mile Island has been for the civilian nuclear business and ensure that the Navy and not the Nuclear Regulatory Commission maintains control over this work.

5. Since Three Mile Island, the Navy has remained free of outside interference with respect to reactor operation and we have not lost a single one of the 155 approved foreign ports where these nuclear powered ships are free to operate based on a very simple set of "assurances" that exist because of our record.

6. Port entry is very important to crew morale on nuclear ships, particularly since they often operate in remote regions for long periods of time. The Navy needs to prevail on the State Department to give this area much higher priority in dealings with countries such as France where nuclear ships cannot now make visits.

7. In the four year period 1976 - 1980, the Navy fell 800 officers short in attaining the cumulative number of officers needed for entry into the nuclear power training program. To maintain our leadership in the nuclear Navy, and our safe operating record, the Navy needs to establish a consistent, stable policy that will assure that enough new officers enter nuclear power training each year to meet the Navy's needs to man its nuclear powered submarines and surface ships. It is important to achieve this to the maximum extent practicable through a "volunteer" system to meet individual preferences, but these should not override the needs of the Navy.

8. The Navy should get a better return on its investment in the training of midshipmen at the Naval Academy and in the Naval Reserve Officer Training Corps (NROTC) program:

a. Curricula must be carefully controlled to assure midshipmen have the proper technical backgrounds for their future officer assignments.

b. Midshipmen should not be allowed to resign after two years of free education without any residual obligation for service as an enlisted person or pay-back of funds.

c. Consideration should be given to increasing from four years to five years the initial active duty commitment of officers from NROTC sources, consistent with current USNA requirements.

9. In the past, shipbuilders have managed to deal directly with the Secretariat in contract matters, thus bypassing the Naval Sea Systems Command. This makes NAVSEA ineffective, hurts morale, and overloads the Secretariat. In cases where high level meetings involving the Secretariat are necessary, the responsible NAVSEA officials should be present.

10. Contractual problems with the shipbuilders absorb the time of technical people, both contractor and Government, whose efforts should be devoted to producing quality ships. Action in holding ships back from Electric Boat can help reestablish a proper business relationship with that yard.

11. The SECNAV committee report is being perceived as a Navy endorsement of Electric Boat and confirmation that the yard's problems are behind them. The Navy should place credence only on proven performance, not on Electric Boat's promises to meet their latest slipped schedules. Until there is a drastic change in management attitude at that yard, production and quality control problems will recur.

12. The following are important issues that need to be settled with Electric Boat prior to awarding more work to that shipyard:

a. The company refuses to negotiate and agree to changes on TRIDENT without reserving rights to later submit delay claims. This violates the company's P.L. 85-804 claim settlement agreement and forces the Navy to unilaterally order even minor changes.

b. There is currently a backlog of over 1,200 unpriced TRIDENT contract changes at Electric Boat which the Navy has been unable to settle because of Electric Boat's delay allegations. This will lead to claims.

c. Electric Boat refused to extend a contract with the Navy's reactor plant prime contractor for repair of Government Furnished Equipment on SSN 688 class ships. The Navy is having to order these repairs be accomplished on an unpriced basis – again, potential claim items.

d. Electric Boat has announced it is preparing insurance claims which will total about $100 million. Despite repeated NAVSEA efforts to get Electric Boat to submit these claims so they can be evaluated and disposed of promptly, Electric Boat has refused to do so. I predict that before we are through, Electric Boat's total claim will be far more than $100 million.

e. Electric Boat withholds, denies, or impedes access to much of the cost and schedular data requested by the Supervisor of Shipbuilding and Defense Contract Audit Agency.

13. Although a more efficient yard, Newport News is often more difficult to deal with than Electric Boat. The following are examples of contractual problems at Newport News which should be resolved prior to awarding the three ship SSN 688 class contract:

a. The company has refused to accept any contract provision which in any way limits their ability to accumulate massive claims and submit them years after the fact. Specifically, the company has refused to accept the Navy's clauses which require prompt notification of changes and periodic claims releases.

b. The company has been overpricing cost reimbursement type contracts for submarine overhaul work. Starting with a target fee of about 10 percent, the company has repeatedly attained 17-1/2 percent fees under the incentive sharing provisions of the contract.

c. The company has reneged on a longstanding procedure for authorizing and paying for repairs and modifications to Government furnished reactor plant equipment.

d. Under existing contracts the company has repeatedly asserted cross-contract impact resulting from technical changes. This has forced the Navy to defer some important work and to issue other work on a unilateral unpriced basis.

14. Building nuclear submarines, or major parts thereof, abroad would have serious security and technical problems, as well as political ones. We cannot afford to compromise our nuclear propulsion technology. Nor could I assure the nuclear propulsion safety of work done overseas.

15. Resuming construction of submarines at Naval shipyards would be well worth the added initial costs. We need alternatives when Newport News and Electric Boat become recalcitrant on contractual issues. We also can use the extra capacity.

16. The Navy must develop and maintain a strong in-house design and technical capability in NAVSEA and the Naval shipyards. This requires a concerted, Navy-wide effort to: (1) develop and strengthen its Engineering Duty Officer community; and (2) assure that senior ED's with shipbuilding and ship maintenance experience are placed in key technical assignments, including the positions of COMNAVSEA and his principal assistants.

17. I understand that Mr. O'Neil and Mr. Sawyer are your top advisors in the area of shipbuilding. It might be beneficial for them to meet with me and my staff to be sure they are fully aware of these issues before you meet with shipyard officials.

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
8 June 1981

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Recommendation against loosening the criteria governing allocability of selling costs to defense contracts

1. My memorandum to you of 10 February 1981 recommended the Navy oppose a proposed change to the Defense Acquisition Regulations governing the allocability of selling costs to defense contracts. Under the proposed change, the test for allocability would be whether the sales activities have a "demonstrated potential for materially reducing overall costs." I pointed out that this change would be tantamount to making all contractor selling expenses allowable since defense contractors would always be able to demonstrate that more business results in reduced overhead rates.

2. Your response reiterates the broad benefit principle long espoused by defense contractors and lobbyists. You state:

> "The Navy took a formal minority position with the DAR Council on the case recommending that a broader allocation base be employed where it is equitable to do so. The Navy believed that the narrow allocation of selling costs serves to discourage efforts on the contractor's part to obtain increased volume and reduce future unit costs to the Navy."

You further state you believe that the narrow allocation policy has the "obvious effect of increasing future unit costs to the Navy."

3. In my opinion, it is not obvious that the "broad benefit" policy will lower unit costs. By accepting this policy, the Government opens the door for Defense contractors to charge commercial and foreign selling expense to Government contracts far in excess of any benefit derived from increased business volume.

4. You emphasize that selling costs will not be allowed in all cases but only when there is a demonstrated potential for materially reducing overall costs. You acknowledge that "selling costs by their nature are difficult to negotiate" but consider that "the best quality settlements of selling expense will emerge if we are able to provide responsible field people with guidelines sufficiently comprehensive to ensure that they are employing the proper considerations together with a cost principle that can accommodate the full range of their good judgment."

5. Because the impact of selling efforts on future sales is highly speculative, I do not believe guidelines can be developed that will enable Government negotiators to arrive at "quality settlements" of

selling expense. The DAR Committee has attempted, in a new draft cost principle, to provide workable guidelines for determining the allowability and allocability of selling expense. The new proposal adds many words and a formula for determining when an advance agreement in this area will be required. The bottom line, though, is that selling expenses will be allowed when they "have a potential for reducing overall costs to the Government through increasing the sales volume of the cost center in which Government contracts are performed."

6. The Navy should face the selling expense issue directly and acknowledge that contracting officers will not be able to weigh the added cost of selling effort against the benefit of reduced overhead. Defense contractors, armed with sophisticated sales projection techniques and the like, will routinely claim overall benefit for the Government. The Government will pay out millions of dollars to help contractors promote their commercial and foreign sales in return for elusive future reductions in overhead rates.

7. The need to eliminate waste and abuse in the expenditure of public funds has received increased emphasis in the last few months. Particular attention is being directed to the Defense Department because of possible increases in its budget and because of the perception that waste in the Department is rampant. In my opinion, the proposed change to the criteria governing selling expense is an invitation to abuse and will waste millions of dollars of Government funds.

8. I previously recommended that the proposed change be modified to delete parts 15-205.37(b)(1), 15-205.37(b)(2)(ii), and 15-205.37(c). With these changes, the selling expense clause would state that "selling costs are allocable to Government business if the sales activities are undertaken for the purposes of application or adaptation of the contractor's products to the U.S. Government use." I strongly recommend that the Navy support this provision rather than the broad benefit criteria for determining the allowability of selling costs.

9. I would appreciate being advised of the actions you are taking with regard to my recommendation.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Manpower, Reserve Affairs & Logistics)
Director, Defense Contract Audit Agency
Commander, Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
12 June 1981

MEMORANDUM FOR THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Subj: Independent Research and Development (IR&D) Being Conducted by Westinghouse Electric Corporation, Electro-Mechanical Division

1. During our telephone discussion on May 18, 1981 I pointed out that the Assistant Secretary of the Navy (Research, Engineering and Systems) had written you on April 10, 1981 about a case where the Navy and Air Force wanted to disallow certain Independent Research and Development (IR&D) work being performed by Westinghouse, but were overruled by the Army member of the IR&D Technical Evaluation Group. The proposed IR&D work involves equipment for nuclear reactors, an area under my technical congnizance. If allowed, the cost of this work will be charged to contracts under my cognizance. In his letter to you, the Assistant Secretary recommended that you overrule the Army in this case and revise the rules of the Technical Evaluation Group so that one member cannot decide to allow projects objected to by other members unless substantial military application can be documented. I understand that you have not yet responded to the Assistant Secretary's letter.

2. In view of the emphasis this Administration has placed on reducing unnecessary expenditures, it is important that cases like this be used to set a tone of economy in the Defense Department. The Defense Department traditionally has been very liberal in allowing IR&D costs.

3. I recommend that you act favorably on the Navy's recommendations in this case and that you also look into abolishing, or at least drastically cutting back, the entire IR&D program.

4. I would appreciate being advised of the actions you are taking in this regard.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Research, Engineering and Systems)
Assistant Secretary of the Navy
(Manpower, Reserve Affairs and Logistics)
Chief of Naval Material
Chief of Naval Research
Commander, Naval Sea Systems Command

UNDER SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

RESEARCH AND
ENGINEERING

6 JUL 1981

MEMORANDUM FOR THE DEPUTY COMMANDER, NUCLEAR PROPULSION DIRECTORATE, NAVAL SEA SYSTEMS COMMAND

SUBJECT: Independent Research and Development (IR&D) Projects of the Westinghouse Electro-Mechanical Division

This is in response to your 12 June memorandum concerning the above subject.

As I indicated in my memorandum of 8 June to the Assistant Secretary of the Navy, we have carefully reviewed the WEMD projects in question, taking into account the Navy views and those of the IR&D Technical Evaluation Group. We find that the WEMD projects dealing with Reactor Coolant Pump Development (EM-80-1D) and Valve Development (EM-80-3D) do not satisfy the requirements of potential military relevance, and we support the Navy recommendation that the costs of these projects be disallowed for reimbursement as IR&D.

For the remaining three WEMD projects, we concur with the opinion of the Technical Evaluation Group that the technology benefits to be expected are sufficient to justify a finding of potential military relevance.

I trust that you will appreciate the Navy's position was carefully considered in arriving at these conclusions. I can also assure you that we share the same goals of insuring against unnecessary expenditure in maintaining the health and vigor of our Armed Forces and the supporting technology upon which they depend.

R. D. DeLauer

cc: ASN(RES)
ASN(MRA&L)
Chief, Naval Material
Chief, Naval Research
Commander, NSSC

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
15 June 1981

MEMORANDUM FOR THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Subj: Recommendation against loosening the criteria governing allocability of selling costs to defense contracts

Encl: (1) Notes on Proposal to Loosen the Criteria Governing Allocability of Selling Costs to Defense Contracts

1. In view of your interest in saving money in defense procurement, I thought it appropriate to bring to your attention a change currently being proposed to the Defense Department policy on the allocability of contractor selling costs. As in the case of IR&D, which we have previously discussed, this is an attempt by some defense contractors to shift more of the cost of their commercial efforts to defense contracts.

2. The current policy allows contractors to charge selling costs to the Government only when the Government benefits directly from the sales effort. This makes good sense. For the most part defense requirements arise from military needs, not from the sales efforts of equipment manufacturers. The current policy also prohibits charging to defense contracts the cost of selling military equipment to foreign countries.

3. Defense contractors are trying to change the current policy to allow selling costs whenever sales activities have a "demonstrated potential for materially reducing overall costs." Since contractors contend that anything that increases company business reduces overhead rates, the proposed change, if adopted, paves the way for them to insist that all selling expenses are allowable, including those aimed at promoting commercial products and overseas sales of military equipment. This would drive up the cost of military hardware and result in the Defense Department subsidizing commercial activities.

4. Looking into the history of this proposed change should provide insight into how effective defense contractors can be in getting subtle but costly loopholes incorporated into defense procurement regulations. Enclosure (1) contains more detailed information concerning this problem. I recommend you oppose the proposed change.

5. I would appreciate being advised of the actions you are taking with regard to my recommendation.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy (Manpower, Reserve Affairs & Logistics)
Director, Defense Contract Audit Agency
Chief of Naval Material
Commander, Naval Sea Systems Command

NOTES ON PROPOSAL TO LOOSEN THE CRITERIA GOVERNING ALLOCABILITY OF SELLING COSTS TO DEFENSE CONTRACTS

1. The Defense Acquisition Regulation (DAR) Council is considering a change to the Defense Department cost principle governing reimbursement of contractor selling expense (DAR Section 15-205.37). If adopted, the proposed change would open the door for defense contractors to charge to their Government contracts, selling costs aimed primarily at promoting commercial or foreign sales.

2. As currently written, the Defense Acquisition Regulations provide for Government reimbursement of contractor selling expenses only to the extent that they benefit the U. S. Government in a specific way. Section 15-205.37 states:

> "Allocability of selling costs will be determined in the light of reasonable benefit to the U. S. Government arising from such activities as technical, consulting, demonstration, and other services which are for purposes such as application or adaptation of the contractor's products to U. S. Government use for its own requirements."

3. Under the proposed change, the test for allocability of sales expenses to defense contracts would be whether the sales activities have a "demonstrated potential for materially reducing overall costs." This would be tantamount to making all contractor selling expenses allowable, since defense contractors would always be able to demonstrate that more business results in reduced overhead rates.

4. The current review of the DAR selling costs coverage was started to determine if the Arms Export Control Act specifically prohibits charging Foreign Military Sales selling costs to Government contracts. Defense lobbyists apparently seized this opportunity to try to slip in a major policy change - in this case, one that would make broad benefit to the Government the criteria for allocability, rather than allowing selling expenses only when they benefit the Government in a specific way.

5. With regard to the proposal to allow selling expenses based on "broad benefit":

a. Defense contractors, armed with sophisticated sales projection techniques and the like, will routinely claim overall benefit for the Government. The impact of selling effort on future sales is highly speculative so that guidelines cannot be developed that will enable Government negotiators to weigh the added cost of selling effort against the benefit of reduced overhead.

b. The Government will pay out millions of dollars to help contractors promote their commercial and foreign sales in return for elusive future reductions in overhead rates.

ENCLOSURE (1)

c. In addition to driving up the cost of military hardware, the proposed change will give contractors heavily engaged in defense work a substantial and unfair advantage in commercial markets over competitors who are not in a position to charge their selling and marketing expenses to Government contracts.

6. The need to eliminate waste and abuse in the expenditure of public funds has received increased emphasis in the last few months. Particular attention is being directed to the Defense Department because of possible increases in its budget and because of the perception that waste in the Department is rampant. The proposed change to the criteria governing selling expense is an invitation to abuse and will waste millions of dollars of Government funds.

7. The Defense Department should strongly object to a major change in the Government's policy on selling costs. In this regard, parts 15-205.37(b)(1), 15-205.37(b)(2)(ii) and 15-205.37(c) should be deleted from the change being considered by the DAR Committee. The regulation would then state:

> "Selling costs are allocable to Government business if the sales activities are undertaken for the purposes of application or adaptation of the contractor's products to the U. S. Government use."

THE UNDER SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

RESEARCH AND
ENGINEERING

25 JUN 1981

MEMORANDUM FOR NAVAL SEA SYSTEMS COMMAND
Attention: Admiral H. G. Rickover

SUBJECT: Recommendation Against Loosening the Criteria Governing Allocability of Selling Costs to Defense Contracts

Thank you for your memorandum of 15 June 1981 regarding subject selling costs. The proposed coverage was developed by the Defense Acquisition Regulatory (DAR) Council and provided to Industry and Government activities for comment. The comments received, including yours, reflect the diverse opinions that one would expect from a complex and controversial item of this nature.

I appreciate your interest in this matter and have forwarded your memo to the DAR Council for their use in developing final coverage on this important item of cost. Additionally, if you have ~~not already~~ done so, I suggest that you ~~consider~~ forwarding your memo and whatever back-up material you have through the appropriate Navy channels to the Navy Policy Member of the DAR Council so that he will be better prepared to articulate the Navy's concerns.

R. D. DeLauer

92-784 O - 82 - 17

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

9 July 1981

The Honorable Nicholas Mavroules
House of Representatives
Washington, D. C. 20515

Dear Mr. Mavroules:

In hearings before the House Armed Services Committee, Subcommittee On Procurement and Military Nuclear Systems, I testified on the need for profit limiting legislation in defense procurement, and identified several elements which I consider should be included in such legislation. During the hearing you requested that I comment on H. R. 2891, a bill you have introduced to replace the profit limiting provisions of the Vinson-Trammell Act.

H. R. 2891 would establish a procedure for screening profits on defense contracts over $5,000,000. A review for excessive profits would be required when, during a period of war or national emergency, a contractor's profit percentage on defense contracts over $5,000,000 exceeded by 40% his average profit percentage for a three year base period. The agency head would then determine whether total profits made during the period of war or national emergency on defense contracts over $5,000,000 were excessive taking into account contractor risk, nature of goods provided, and level of investment.

My testimony on June 16, 1981 listed several elements that I consider should be part of any profit limiting legislation. H. R. 2891 includes some of these elements. It applies to all defense work, not just to aircraft and shipbuilding. It covers subcontracts as well as prime contracts. In determining excessive profits, the bill provides for consideration of many of the statutory factors specified in the Renegotiation Act.

In my opinion, however, H. R. 2891 does not provide adequate means to recoup excessive profits on defense contracts. I believe the bill should be strengthened to incorporate the following additional elements mentioned in my testimony:

1. The profit limits should apply in peace as well as during war or national emergency.

2. Provisions for limiting profits should apply to individual contracts and subcontracts over a specified amount to avoid situations in which contractors can hide excessive profits by averaging them with less profitable work.

3. Exemptions for competition should apply only to contracts awarded after formal advertising.

I also see certain problems with the mechanism proposed for screening for excessive profits. H. R. 2891 uses Internal Revenue Service rules for determining profit instead of Defense Department cost rules and standards set by the Cost Accounting Standards Board. Since Defense Department cost rules and Cost Accounting Standards are used to price and administer defense contracts, I believe these rules should also apply in determining excessive profits. The bill requires that profits made during a war or national emergency only be screened if the profit percentage reported exceeds by 40% that reported during a three year base period prior to the war or national emergency. This could prevent recovery of excessive profits from contractors that were achieving very high or excessive profits during the base period.

The bill allows recovery of excessive profits on contracts above $5,000,000. However, only contractors with $15,000,000 of defense work are screened for excessive profits. I consider a procedure which would screen all contracts above $500,000 would be more effective in recovering excessive profits.

I believe that there is a compelling need for Congress to pass strong profit limiting legislation. I hope my comments on H. R. 2891 will be helpful in this regard. If I can be of further assistance, please let me know.

Sincerely,

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

09 JUL 1981

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Recommendation against loosening the criteria governing allocability of selling costs to defense contracts

Ref: (a) Memorandum for the Chief of Naval Material dtd 10 February 1981
(b) Memorandum for the Chief of Naval Material dtd 8 June 1981
(c) Memorandum for the Under Secretary of Defense for Research and Engineering dtd 15 June 1981
(d) Memorandum from the Under Secretary of Defense for Research and Engineering dtd 25 June 1981

1. In references (a) and (b) I pointed out my concerns regarding the proposed change to the Defense Department policy on selling costs. In reference (c) I reiterated these concerns to the Under Secretary of Defense for Research and Engineering.

2. In reference (d) the Under Secretary said he had referred this matter to the Defense Acquisition Regulation (DAR) Council. He further suggested that I provide a copy of my memorandum and related backup material to the Navy Policy Member of the DAR Council. Attached are copies of references (a), (b), (c) and (d) for use by the Navy Policy Member.

3. As explained in references (a) and (b), the proposal to relax the existing criteria governing allocability of contractor selling expenses will increase costs to the Government and result in the Government subsidizing marketing efforts that are of only incidental, if any, value to the national defense. I strongly recommend that the Navy oppose the proposed change.

H. G. Rickover

Copy to:
Under Secretary of Defense
(Research and Engineering)
Assistant Secretary of the Navy
(Shipbuilding and Logistics)
Director, Defense Contract Audit Agency
Commander, Naval Sea Systems Command

NR DISTRIBUTION
Rickover (p)
Foster (y)
Bradfield Subj/Rdg

CONCURRENCE
Foster 7/8/81

Record Note:

On June 25, 1981, Mr. DeLauer (Under Secretary of Defense for Research and Engineering) responded to your June 8, 1981 letter to him on a proposed relaxation of the Defense Department policy on selling costs. DeLauer recommended you provide copies of correspondence on this issue to the Navy Policy Member of the DAR Council. This letter forwards your letters on this issue to the Navy Policy Member of the DAR Council (Williamson) through NAVMAT.

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
10 February 1981

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Recommendation against loosening the criteria governing allocability of selling costs to defense contracts

1. I understand that the Defense Acquisition Regulation (DAR) Committee is considering a proposed change to Defense Department cost principles governing reimbursement of contractor selling expense (DAR Section 15-205.37). If adopted, the proposed change would open the door for defense contractors to charge to their Government contracts selling costs aimed primarily at promoting commercial or foreign sales. The purpose of this memorandum is to recommend that the Navy dissuade the DAR Committee from adopting the proposed change.

2. For many years several large defense contractors have been looking for ways to get the Department of Defense to underwrite company efforts to develop new markets and promote commercial sales. One large conglomerate has a division which is devoted primarily to manufacturing large specialized equipment for the Navy. As a sole source supplier, the company can afford to run up the costs without losing the business. Because the amount of defense work they receive depends on the Navy's needs. not on company sales efforts, there is little or no selling expense involved. The company accountants, however, contend that, under these contracts, the Navy should pay a share of the corporation's selling expenses involved in attracting commercial customers. Other large defense contractors are trying to get the Defense Department to help pay the costs of their efforts to market military or commercial products overseas.

3. As currently written, the Defense Acquisition Regulations provide for Government reimbursement of contractor selling expenses only to the extent that they benefit the U.S. Government in a specific way. Section 15-205.37 states:

> "Allocability of selling costs will be determined in the light of reasonable benefit to the U.S. Government arising from such activities as technical, consulting, demonstration, and other services which are for purposes such as application or adaptation of the contractor's products to U.S. Government use for its own requirements."

Under the proposed change, however, the test for allocability of sales expenses to defense contracts would be whether the sales activities have a "demonstrated potential for materially reducing overall costs." This would be tantamount to making all contractor

selling expenses allowable, since defense contractors would always be able to demonstrate that more business results in reduced overhead rates - the rationale some of them now use to claim that the Government "benefits" from their selling activities in commercial and overseas markets. Under that criteria, advertising expenses or even bribes, could be rationalized as benefiting the Government.

4. I understand that the current review of the DAR selling costs coverage was started to determine if the Arms Export Control Act specifically prohibits charging Foreign Military Sales selling costs to Government contracts. As usual, defense lobbyists have seized this opportunity to try to slip in a major policy change - in this case, one that could result in the U.S. taxpayer subsidizing defense contractors' commercial and foreign selling expenses. In addition to driving up the cost of military hardware, the proposed change would give contractors heavily engaged in defense work a substantial and unfair advantage in commercial markets over competitors who are not in a position to charge their selling and marketing expenses to Government contracts.

5. I believe that the Navy should strongly object to the proposed change in the Government's policy on selling costs. I recommend that parts 15-205.37(b)(1), 15-205.37(b)(2)(ii), and 15.205.37(c) of the proposed change be deleted to ensure that selling costs are charged to Government contracts only when actual benefits are received.

6. I would appreciate being advised of the actions you are taking in this regard.

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
8 June 1981

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Recommendation against loosening the criteria governing allocability of selling costs to defense contracts

1. My memorandum to you of 10 February 1981 recommended the Navy oppose a proposed change to the Defense Acquisition Regulations governing the allocability of selling costs to defense contracts. Under the proposed change, the test for allocability would be whether the sales activities have a "demonstrated potential for materially reducing overall costs." I pointed out that this change would be tantamount to making all contractor selling expenses allowable since defense contractors would always be able to demonstrate that more business results in reduced overhead rates.

2. Your response reiterates the broad benefit principle long espoused by defense contractors and lobbyists. You state:

> "The Navy took a formal minority position with the DAR Council on the case recommending that a broader allocation base be employed where it is equitable to do so. The Navy believed that the narrow allocation of selling costs serves to discourage efforts on the contractor's part to obtain increased volume and reduce future unit costs to the Navy."

You further state you believe that the narrow allocation policy has the "obvious effect of increasing future unit costs to the Navy."

3. In my opinion, it is not obvious that the "broad benefit" policy will lower unit costs. By accepting this policy, the Government opens the door for Defense contractors to charge commercial and foreign selling expense to Government contracts far in excess of any benefit derived from increased business volume.

4. You emphasize that selling costs will not be allowed in all cases but only when there is a demonstrated potential for materially reducing overall costs. You acknowledge that "selling costs by their nature are difficult to negotiate" but consider that "the best quality settlements of selling expense will emerge if we are able to provide responsible field people with guidelines sufficiently comprehensive to ensure that they are employing the proper considerations together with a cost principle that can accommodate the full range of their good judgment."

5. Because the impact of selling efforts on future sales is highly speculative, I do not believe guidelines can be developed that will enable Government negotiators to arrive at "quality settlements" of

selling expense. The DAR Committee has attempted, in a new draft cost principle, to provide workable guidelines for determining the allowability and allocability of selling expense. The new proposal adds many words and a formula for determining when an advance agreement in this area will be required. The bottom line, though, is that selling expenses will be allowed when they "have a potential for reducing overall costs to the Government through increasing the sales volume of the cost center in which Government contracts are performed."

6. The Navy should face the selling expense issue directly and acknowledge that contracting officers will not be able to weigh the added cost of selling effort against the benefit of reduced overhead. Defense contractors, armed with sophisticated sales projection techniques and the like, will routinely claim overall benefit for the Government. The Government will pay out millions of dollars to help contractors promote their commercial and foreign sales in return for elusive future reductions in overhead rates.

7. The need to eliminate waste and abuse in the expenditure of public funds has received increased emphasis in the last few months. Particular attention is being directed to the Defense Department because of possible increases in its budget and because of the perception that waste in the Department is rampant. In my opinion, the proposed change to the criteria governing selling expense is an invitation to abuse and will waste millions of dollars of Government funds.

8. I previously recommended that the proposed change be modified to delete parts 15-205.37(b)(1), 15-205.37(b)(2)(ii), and 15-205.37(c). With these changes, the selling expense clause would state that "selling costs are allocable to Government business if the sales activities are undertaken for the purposes of application or adaptation of the contractor's products to the U.S. Government use." I strongly recommend that the Navy support this provision rather than the broad benefit criteria for determining the allowability of selling costs.

9. I would appreciate being advised of the actions you are taking with regard to my recommendation.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Manpower, Reserve Affairs & Logistics)
Director, Defense Contract Audit Agency
Commander, Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
15 June 1981

MEMORANDUM FOR THE UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Subj: Recommendation against loosening the criteria governing allocability of selling costs to defense contracts

Encl: (1) Notes on Proposal to Loosen the Criteria Governing Allocability of Selling Costs to Defense Contracts

1. In view of your interest in saving money in defense procurement, I thought it appropriate to bring to your attention a change currently being proposed to the Defense Department policy on the allocability of contractor selling costs. As in the case of IR&D, which we have previously discussed, this is an attempt by some defense contractors to shift more of the cost of their commercial efforts to defense contracts.

2. The current policy allows contractors to charge selling costs to the Government only when the Government benefits directly from the sales effort. This makes good sense. For the most part defense requirements arise from military needs, not from the sales efforts of equipment manufacturers. The current policy also prohibits charging to defense contracts the cost of selling military equipment to foreign countries.

3. Defense contractors are trying to change the current policy to allow selling costs whenever sales activities have a "demonstrated potential for materially reducing overall costs." Since contractors contend that anything that increases company business reduces overhead rates, the proposed change, if adopted, paves the way for them to insist that all selling expenses are allowable, including those aimed at promoting commercial products and overseas sales of military equipment. This would drive up the cost of military hardware and result in the Defense Department subsidizing commercial activities.

4. Looking into the history of this proposed change should provide insight into how effective defense contractors can be in getting subtle but costly loopholes incorporated into defense procurement regulations. Enclosure (1) contains more detailed information concerning this problem. I recommend you oppose the proposed change.

5. I would appreciate being advised of the actions you are taking with regard to my recommendation.

H. G. Rickover

Copy to:
Assistant Secretary of the Navy (Manpower, Reserve Affairs & Logistics)
Director, Defense Contract Audit Agency
Chief of Naval Material
Commander, Naval Sea Systems Command

NOTES ON PROPOSAL TO LOOSEN THE CRITERIA GOVERNING ALLOCABILITY OF SELLING COSTS TO DEFENSE CONTRACTS

1. The Defense Acquisition Regulation (DAR) Council is considering a change to the Defense Department cost principle governing reimbursement of contractor selling expense (DAR Section 15-205.37). If adopted, the proposed change would open the door for defense contractors to charge to their Government contracts, selling costs aimed primarily at promoting commercial or foreign sales.

2. As currently written, the Defense Acquisition Regulations provide for Government reimbursement of contractor selling expenses only to the extent that they benefit the U. S. Government in a specific way. Section 15-205.37 states:

> "Allocability of selling costs will be determined in the light of reasonable benefit to the U. S. Government arising from such activities as technical, consulting, demonstration, and other services which are for purposes such as application or adaptation of the contractor's products to U. S. Government use for its own requirements."

3. Under the proposed change, the test for allocability of sales expenses to defense contracts would be whether the sales activities have a "demonstrated potential for materially reducing overall costs." This would be tantamount to making all contractor selling expenses allowable, since defense contractors would always be able to demonstrate that more business results in reduced overhead rates.

4. The current review of the DAR selling costs coverage was started to determine if the Arms Export Control Act specifically prohibits charging Foreign Military Sales selling costs to Government contracts. Defense lobbyists apparently seized this opportunity to try to slip in a major policy change - in this case, one that would make broad benefit to the Government the criteria for allocability, rather than allowing selling expenses only when they benefit the Government in a specific way.

5. With regard to the proposal to allow selling expenses based on "broad benefit":

a. Defense contractors, armed with sophisticated sales projection techniques and the like, will routinely claim overall benefit for the Government. The impact of selling effort on future sales is highly speculative so that guidelines cannot be developed that will enable Government negotiators to weigh the added cost of selling effort against the benefit of reduced overhead.

b. The Government will pay out millions of dollars to help contractors promote their commercial and foreign sales in return for elusive future reductions in overhead rates.

ENCLOSURE (1)

c. In addition to driving up the cost of military hardware, the proposed change will give contractors heavily engaged in defense work a substantial and unfair advantage in commercial markets over competitors who are not in a position to charge their selling and marketing expenses to Government contracts.

6. The need to eliminate waste and abuse in the expenditure of public funds has received increased emphasis in the last few months. Particular attention is being directed to the Defense Department because of possible increases in its budget and because of the perception that waste in the Department is rampant. The proposed change to the criteria governing selling expense is an invitation to abuse and will waste millions of dollars of Government funds.

7. The Defense Department should strongly object to a major change in the Government's policy on selling costs. In this regard, parts 15-205.37(b)(1), 15-205.37(b)(2)(ii) and 15-205.37(c) should be deleted from the change being considered by the DAR Committee. The regulation would then state:

> "Selling costs are allocable to Government business if the sales activities are undertaken for the purposes of application or adaptation of the contractor's products to the U. S. Government use."

THE UNDER SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

RESEARCH AND ENGINEERING

25 JUN 1981

MEMORANDUM FOR NAVAL SEA SYSTEMS COMMAND
Attention: Admiral H. G. Rickover

SUBJECT: Recommendation Against Loosening the Criteria Governing Allocability of Selling Costs to Defense Contracts

Thank you for your memorandum of 15 June 1981 regarding subject selling costs. The proposed coverage was developed by the Defense Acquisition Regulatory (DAR) Council and provided to Industry and Government activities for comment. The comments received, including yours, reflect the diverse opinions that one would expect from a complex and controversial item of this nature.

I appreciate your interest in this matter and have forwarded your memo to the DAR Council for their use in developing final coverage on this important item of cost. Additionally, if you have ~~not already~~ done so, I suggest that you ~~consider~~ forwarding your memo and whatever back-up material you have through the appropriate Navy channels to the Navy Policy Member of the DAR Council so that he will be better prepared to articulate the Navy's concerns.

D. A. DeLauer

Department of Energy
Washington, D.C. 20585

July 13, 1981

The Honorable Samuel S. Stratton
Chairman, Subcommittee on Procurement
and Military Nuclear Systems
Committee on Armed Services
House of Representatives
Washington, D. C. 20515

Dear Mr. Stratton:

The Department of Energy's (DOE) FY 1982 Naval Reactors budget request includes $15 million to initiate design and site preparation work for a naval fuel facility (DOE Project 82-N-111, Materials Facility). This item was included as part of the revised FY 1982 budget submission which was sent to Congress by the President after your subcommittee's hearing on my program and therefore was not discussed in my formal statement. Due to the urgent need for this fuel facility, the $15 million was requested to initiate the work prior to having a total cost estimate.

The House Armed Services Committee's FY 1982 Authorization bill provides only $3 million to conduct a study. The committee report states a study is necessary to:

1. demonstrate there is a need for a second fuel facility,

2. provide a rationale for building a new Government facility rather than adapting an existing commercial or Government facility,

3. make the evaluation required by OMB Circular A-76, and

4. estimate the cost of a new facility and determine the facility site.

The purpose of this letter is to inform you that DuPont has completed a formal cost estimate for the fuel facility at Savannah River and with this information all of the information requested by the committee is now available. I trust this will clear the way for Congressional approval of the full $15 million requested for this project in the President's FY 1982 budget. Since the need for the fuel facility is urgent and work must start as early as possible, I respectfully request your assistance. With regard to the four issues identified in the committee report, the following information is relevant:

1. Need for a Second Fuel Facility. Currently, the Nuclear Fuel Services Company is the sole supplier of naval nuclear fuel. In the past, there have been at least two suppliers. The problems encountered in any sole source situation, such as strikes, operational shutdowns, and natural disasters are exacerbated by the problems caused by Federal regulatory controls and oversight, and by technical difficulties associated with the product - highly enriched uranium.

An assured supply of fuel is essential to the continued, uninterrupted operation of the 40 percent of the Navy's combatant fleet that is nuclear powered, and to ensure that nuclear cores will be available for ships authorized and under construction. The availability of fuel over the long term cannot be guaranteed based on but one fuel supplier. At present, a six month loss of fuel production would begin to impact on the core manufacturers. Moreover, capacity limitations at the present supplier and anticipated program demands prevent building up an acceptable fuel inventory. The need for a second fuel facility was emphasized last year when a four month shutdown at Nuclear Fuel Services substantially reduced fuel stocks and temporarily stopped urgent fuel development work.

2. Rationale for Building a Government Facility. As you know, I prefer to have naval nuclear work performed by commercial suppliers to the maximum extent practicable. All the components required for a naval reactor plant are provided by private industry.

Considerable effort has gone into the attempt to find a second acceptable commercial supplier for naval fuel. After surveying the firms having experience with uranium fabrication, only the current supplier and the naval core manufacturers could be considered to have the necessary experience to build and operate the needed facility within a reasonable cost and time frame because of the unique product requirements and controls.

An additional firm, the General Atomics Company, has stated that it has the necessary qualifications to produce naval fuel. I took issue with this position in my letter to you dated April 30, 1981. Briefly, General Atomics does not produce the same type of fuel, does not use the same process, has little of the necessary equipment, is located far from the user facilities, is of questionable financial stability as a long term defense supplier, and is partially owned by a foreign company.

The current fuel supplier rejected a request to establish a second facility. In addition, neither of the core manufacturers were willing to invest in a naval fuel plant even though these firms have a need for the product. They cited the high cost of facilities in relation to the potential volume of business and the associated risk and uncertainty involved with the product. They did propose to operate a fuel plant if the Government would put up the funds to build a plant on private property, assume all the risks, and provide a guaranteed income.

Such an arrangement is not desirable. The Government would have to absorb nearly all the costs and risks, yet have no control over the plant. Locating the fuel facility at a Government site will ensure direct Government control over a Government funded facility; will guarantee an uninterrupted fuel supply; and will best accommodate fluctuating production levels.

3. A-76 Study. As required by law, an evaluation was made in accordance with Office of Management and Budget Circular A-76, which supports this new industrial-commercial activity as a Government facility. On April 10, 1981 the DOE formally approved the recommendation to establish a fuel facility at the DOE Savannah River Site. I have attached a copy of the A-76 study and DOE's approval. A copy of the study was previously provided to your staff.

A review was also made of available Government facilities; none were found that would materially reduce the cost. The required building(s) represent less than 20 percent of the overall cost, and the manufacturing process equipment is unique. A review was also made to determine the most advantageous location for the fuel facility. The DOE Savannah River Site was selected due to its location on the East coast where the core manufacturing facilities are located; the excellent technical reputation of the site contractor, DuPont, and its experience in building and operating chemical facilities as well as handling highly enriched nuclear fuel; available skilled labor to construct and operate the facility; and experience in the security, accountability, and safeguard requirements pertaining to highly enrished uranium.

4. Total Estimated Cost. DuPont has completed a formal cost estimate for the fuel facility. The estimate has been reviewed and accepted by Naval Reactors and the Savannah River Operations Office. The total estimated cost, including the initial $15 million requested for FY 1982, is $176 million. This figure includes escalation expected to be incurred through completion in FY 1985. If the $15 million for FY 1982 is not authorized, the year's slippage will increase the total cost due to inflation. Mr. Foster of my staff informed Mr. Shwiller of the total cost estimate on June 12, 1981. A revised DOE Construction Project Data Sheet for the fuel facility incorporating this total cost estimate is being formally provided to the House and Senate Armed Services Committees by the Department of Energy. I have attached a copy for your information.

In summary, the fuel facility is needed and work should start as early as possible. Naval Reactors has thoroughly evaluated alternative ways of obtaining a second fuel facility. I am convinced the DOE Savannah River Site is the best location, and the site's operating contractor, DuPont, is the best choice to develop and operate the facility. I trust that this letter

provides the information the committee requested. I do not believe the expenditure of $3 million and the resulting year's delay to further study this project would be beneficial.

I would appreciate your support in the House/Senate conference to initiate construction of the fuel facility at the Savannah River Site at a cost of $15 million in FY 1982.

Respectfully,

H. G. Rickover

Attachments:

1. A-76 Approval and Study
2. DOE Construction Project Data Sheet for the Materials Facility (82-N-11)

92-784 O - 82 - 18

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

27 July 1981

MEMORANDUM FOR THE DEPUTY DIRECTOR (CONTRACT ADMINISTRATION SERVICES) DEFENSE LOGISTICS AGENCY

Subj: Responsibilities of Government Inspectors

1. During a recent production control audit at Bingham-Willamette Company (BWC), a Naval Reactors representative noted problems in BWC's system for control of visitors. This was discussed with the resident Defense Contract Administration Services (DCAS) inspector who stated he had observed unescorted visitors in the facility. Nevertheless, the inspector apparently took no action to correct the situation.

2. The issue at BWC was resolved by a Naval Nuclear Propulsion Program prime contractor. However, I am bringing the item to your attention since the DCAS inspector did not do his job in this case. Government inspectors are expected to note problems and to take action to assure they are resolved, whether or not the problem is within their direct area of responsibility.

3. I recommend you revise applicable instructions to require your inspectors to note and resolve problems, even those not within their direct area of responsibility.

H. G. Rickover

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

4 September 1981

MEMORANDUM FOR THE CHIEF OF NAVAL MATERIAL

Subj: Proposed CNM Acquisition Management Principles

Ref: (a) Deputy Chief of Naval Material memo dated 28 July 1981

1. Reference (a) requested that the Naval Sea Systems Command and other Systems Commands comment on a proposed set of "CNM Acquisition Management Principles" to effect improvements in Naval Material Command acquisition business management practices. The introduction to the proposed principles states that the principles: "shall be incorporated into SES (Senior Executive Service) and MPS (Merit Pay System) objectives, and considered in officer fitness reports for all personnel involved in the execution of the acquisition process."

2. I strongly urge that the proposed acquisition management principles not be issued. My experience is that such "motherhood" directives are largely public relations efforts which do not materially assist or guide those in charge of Government programs. The proposed principles appear to be superfluous, ambiguous, or inconsistent with existing statutes. In my opinion, issuing these principles would serve no useful purpose and may, in fact, have an adverse impact on Navy acquisition.

3. The jargon and ambiguities in the proposed principles provide no meaningful guidance to a program manager. For example, what does it mean to place responsibility at "the lowest level of an organization at which a total view of the program rests"? What purpose is served by stating as principles that the Navy seeks to achieve "efficient execution" of a program and to exercise "good business management judgement"?

4. Another problem arises in the potential conflict between the proposed statement of principles and other requirements which pertain to military procurement. The proposed directives, for example, would require using a competitive procurement "only when there is clear benefit." This is a far different requirement than that established by the Armed Services Procurement Act (10, U.S.C. 2304) which requires the use of formal advertising "in all cases in which the use of such method is feasible and practicable under existing conditions and circumstances." (Underlining added.)

5. Rather than promulgate new acquisition policy doctrine by a statement of principles, I recommend that any changes to existing acquisition policy be handled as formal changes to the Defense

Acquisition Regulation or the Navy Contracting Directives. This would help avoid further proliferation of documents governing acquisition policy and be more effective than a statement of principles.

6. I would appreciate being advised of what action you decide to take in this matter.

H. G. Rickover

Copy to:
Commander, Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO
16 December 1981

MEMORANDUM FOR THE SECRETARY OF THE NAVY

Subj: Request for assistance in obtaining continued funding for construction of a naval nuclear fuel factory at the Department of Energy's Savannah River weapons production facility

Ref: (a) Memo from Assistant Secretary of the Navy (Shipbuilding and Logistics) to Secretary of the Navy with attachments

1. Reference (a) recommended that you arrange for the Secretary of Defense to intercede with the President to restore $47 million in second year funding of a previously approved Department of Energy construction project that would provide an alternate nuclear fuel manufacturing facility to support the Navy. The Secretary of Energy was not successful in his December 10, 1981 appeal to the President. Because the impact of this decision falls on the Navy, it is entirely appropriate for the Secretary of Defense to involve himself personally. I previously informed the Secretary of Energy and Office of Management and Budget officials that if there are not enough funds to cover this project, we would be better off from a defense standpoint continuing to fund construction of the fuel factory, and deferring a nuclear submarine.

2. I was informed this morning that in the absence of new information, you decided there was no sense pursuing the matter again at the Office of the Secretary of Defense level because Deputy Secretary of Defense Carlucci had previously endorsed this project in his 10 December 1981 memorandum to the Chairman of the President's Budget Review Committee (this was prior to Secretary Edward's unsuccessful appeal to the President).

3. The following is additional information that continues to bear heavily on this problem but which does not appear in the formal budget documents:

a. General Atomic, a joint venture of Royal Dutch Shell and Gulf has a "white elephant" on its hands in the form of a plant it built in La Jolla, California in hopes of selling gas-cooled reactors to the civilian nuclear industry or elsewhere.

b. With the collapse of the civilian nuclear business, there has been virtually no market for General Atomic's principal product. The company has lost substantial sums in recent years and has been eagerly looking for business to keep the operation alive.

c. Over the years General Atomic has been effective in getting money from Congress for projects that were not even supported by the Administration. Several years ago General Atomic hired as its President a former director of the DOE's Los Alamos Laboratory. He has been very active trying to find new business to keep the La Jolla plant operating. He is rumored to have access to officials high up in this Administration.

d. Since the General Atomic plant has manufactured nuclear fuel for its gas cooled reactor and other projects, the company has been complaining to members of Congress and to officials in the Department of Energy and the Department of Defense that the Department of Energy's proposal to build a naval nuclear fuel manufacturing facility at its Savannah River site is recreating at government expense a capability that already exists at their plant. The fuel General Atomic manufactures and the facilities they use, however, are far different from what is needed for production of naval nuclear fuel.

e. General Atomics contention has been reviewed in depth by the Department of Energy, the Department of Navy and by the cognizant congressional committees in connection with the DOE's FY 1982 budget request. The issue was laid to rest, Congress appropriated the funds to start construction at Savannah River and work is underway.

f. In the budget review process for FY 1983, the Office of Management and Budget, which had supported this project in FY 1982, suddenly reversed its position and deleted all funds for this project from the Department of Energy's FY 1983 budget requests. The rationale for deleting the funds followed the General Atomics theme that the Department of Energy should arrange to obtain these facilities from private companies.

g. Secretary of Energy Edwards, with an endorsement from Deputy Secretary Carlucci, unsuccessfully appealed this decision to the President's Budget Review Committee. Secretary Edwards later appealed this item to the President and again was turned down.

16 December 1981

4. Important decisions such as the siting of a naval nuclear fuel factory should not be to be dictated by contractors through their access to high level officials. These decisions must be made on the technical merits in light of the Government's overall best interest. In the case of the proposed naval nuclear fuel factory, the technical recommendation of the responsible government agencies is being overridden in an area that has already been the subject of thorough review.

5. The need for this fuel facility is acknowledged by all - even the Office of Management and Budget. The unique and highly controlled process used to manufacture naval nuclear fuel dictates the need for a completely new facility. There is no reason to believe the facilities can be constructed more cheaply in one part of the country than another, nor should any cost differential that might exist in that regard drive the decision over other considerations.

6. The volume of potential business is small, therefore, the Government will end up paying essentially the total cost of the facility no matter where it is located. If the Government is going to have to pay for the facility it makes no sense to locate it on a contractor-owned site where the Government would be beholden to the owner of that site for naval nuclear fuel which is the technological heart of the naval nuclear propulsion program.

7. The site selected by the Department of Energy already handles substantial quantities of highly enriched uranium and other special nuclear material. The proposed fuel factory would be constructed and operated by private contractor. Thus the project is not a case of the Government taking over business from the private sector. Moreover, on a Government site, the naval nuclear fuel factory would not be subject to possible shutdowns by the Nuclear Regulatory Commission.

8. In summary, I believe the problems we are having in getting continued funding for the naval nuclear fuel factory arise from extensive lobbying in the executive branch by General Atomic's representatives trying to recover from past business ventures. Their interest in this case is obvious but should not surmount the interest of the United States Government or taxpayers.

9. Based on the above, I strongly recommend that you elicit Secretary of Defense assistance in restoring FY 1983 funding for this project as recommended by enclosure (1).

H. G. Rickover

Copy to:
Assistant Secretary of the Navy
(Shipbuilding and Logistics)
Chief of Naval Operations
Chief of Naval Material
Commander Naval Sea Systems Command

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

IN REPLY REFER TO

January 27, 1982

Honorable Ted Stevens
Chairman, Defense Subcommittee
Committee on Appropriations
U. S. Senate
Washington, D. C. 20510

Dear Mr. Chairman:

The Senate Appropriations Committee's report on the fiscal year 1982 Defense Appropriation bill requires the Secretary of Defense, with the Navy, to report by 1 February 1982 on alternatives to the current Naval Material Command (NAVMAT) Headquarters, including its disestablishment by the end of fiscal year 1983. In a telephone call on 26 January 1982, Mr. Sean O'Keefe of your staff requested my views and recommendations on this subject.

I have long been of the view that NAVMAT headquarters should be disestablished. In 1976 I recommended the Office of Management and Budget (OMB) disestablish NAVMAT Headquarters and reassign many of its functions to the responsible Navy commands. The OMB staff that looked into this matter concluded:

> "The role of CNM (NAVMAT) and the NAVMAT staff should be limited and staffing substantially reduced... Operational and technical functions should be assigned to systems commanders, with resulting staff reductions in the NAVMAT staff ... (The NAVMAT) role in contract review and resource management should be limited; most should be done by systems commands ... The NAVMAT staff should be reduced by at least two thirds..."

Since that time, however, the NAVMAT Headquarters staff has nearly doubled, and now totals over 800 people. A substantial number of these people serve strictly overhead functions, existing only to support the NAVMAT office itself.

About fifteen years ago, the Navy's technical bureaus were reorganized into six "Systems Commands". The office of NAVMAT was created and superimposed on these systems commands, adding a new bureaucracy and more layers of management. According to its mission statement, NAVMAT is:

> "... a single, integrated material support agency under the Chief of Naval Operations with central responsibility and accountability for total weapon and support systems development, acquisition, improvement, and support, including human operator integration, depot maintenance, supply management, facility support and integrated logistics support planning and implementation."

Honorable Ted Stevens

Despite this charter, the NAVMAT organization, in my view, has done little to help solve the serious problems in weapons procurement and support. Rather, it has tended to impede progress because of the inefficiencies inherent in superimposing organizational layers on those responsible for work. Specifically:

a. NAVMAT decision-makers are too far removed from those familiar with the work. Passing information through extra layers of NAVMAT management delays work, wastes time, and dilutes responsibility.

b. In attempting to carry out its broad responsibilities, NAVMAT tends to become involved in operational functions even though often lacking technical expertise or direct responsibility for the work.

c. Although responsible for formulating policy, making plans and coordinating the systems commands, NAVMAT often merely passes down policy guidance from the Chief of Naval Operations, the Secretary of the Navy, or others. Caught between the systems commands and policy-makers at higher levels, it is impossible for NAVMAT to function as an effective policy maker or assume subordinate command responsibilities.

d. As a higher level staff, NAVMAT's civilian grade structure is likewise higher than in subordinate commands. As a result, some of the best people tend to leave the systems commands and project management offices, where they are badly needed, to obtain more lucrative jobs on the NAVMAT staff.

I recommend the Office of the Chief of Naval Material and the Headquarters Naval Material Command be disestablished. Although a few functions would require transfer to other commands, many could be abolished altogether as duplicating work done elsewhere. For example, overhead functions, existing solely to support the Naval Material Command itself, should be abolished. The NAVMAT-designated project management offices should be eliminated and their functions reassigned to the systems commands. In implementing these changes, strict controls should be established to preclude new management layers and the buildup of large staffs.

I am attaching for your information a copy of the draft report prepared by OMB but never issued in final form, apparently because of objections by the Defense Department. Although the material in the draft report is over five years old, the principles are still valid.

Sincerely,

H. G. Rickover

H. G. RICKOVER

CC:
Sen. Mark O. Hatfield
Sen. William Proxmire
Mr. Sean O'Keefe

Honorable Ted Stevens

08 DISTRIBUTION:
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Kerins subj/rdg

RECORD NOTE:

1. This letter is based on a review by Kerins and discussions between Kerins, Johnson, and Foster.

KERINS(FOSTER)/gatewood 1/26/82

DISCUSSION DRAFT

REVIEW OF NAVAL MATERIAL COMMAND ORGANIZATION

AUGUST 1976

MANAGEMENT DIVISION,
NATIONAL SECURITY & INTERNATIONAL AFFAIRS

OFFICE OF MANAGEMENT & BUDGET

PRELIMINARY RECOMMENDATIONS

OVERVIEW

- RECOMMENDATIONS ARE BASED PRIMARILY ON INTERVIEWS.
- RECOMMENDATIONS ARE BASED ON KEY MANAGEMENT PRINCIPLES:
  - -- PLAN EFFECTIVELY TO REDUCE CRISIS MANAGEMENT.
  - -- ESTABLISH STRONG ACCOUNTABILITY AS THE BASIS FOR CONTROL.
  - -- MINIMIZE LAYERING AND OVERLAP IN PROJECT AND OPERATIONAL MANAGEMENT.
  - -- STRENGTHEN DECISIONMAKING.
  - -- PROVIDE EFFECTIVE PROFESSIONAL DEVELOPMENT.
- ALL RECOMMENDATIONS MUST BE TAKEN TOGETHER AS A COMPREHENSIVE, INTERRELATED PROGRAM.

SPECIFIC RECOMMENDATIONS

1. THE NAVY SHOULD SET A HIGH PRIORITY ON BUILDING AND MAINTAINING A STRONG TECHNICAL CAPABILITY IN THE NMC.
   - -- A TECHNICAL ORGANIZATION IS THE KEY TO MAINTAINING AN ACQUISITION CAPABILITY DEVELOPMENT.
   - -- BUILDING THE TECHNICAL ORGANIZATIONS IN NAVSEA AND NAVAIR SHOULD HAVE THE HIGHEST PRIORITY:
     - (1) NAVSEA SHOULD STRENGTHEN NAVSEC AND CONSIDER SETTING IT UP AS A STAND-ALONE ORGANIZATION.
     - (2) NAVAIR SHOULD BUILD AROUND AIR-05'S TECHNICAL ORGANIZATION.
   - -- THE NAVY LABORATORIES SHOULD BE ASSIGNED TO APPROPRIATE USER SYSTEMS COMMANDS.
   - -- NAVMAT SHOULD BREAK ITS DEPENDENCE ON OUTSIDE CONTRACTORS FOR MANAGEMENT AND TECHNICAL SUPPORT.

PRELIMINARY RECOMMENDATIONS (CONTINUED)

2. THE ROLE OF CNM -- AND THE NAVMAT STAFF -- SHOULD BE LIMITED AND STAFFING SUBSTANTIALLY REDUCED.

   -- THE NAVY SHOULD RETAIN THE CNM AS THE "CHAIRMAN OF THE BOARD" TO PROVIDE LEADERSHIP FOR MATERIAL COMMUNITY; AS INTERFACE WITH CNO, SECNAV, JLC AND OTHER SERVICES AND THE CONGRESS; AND COORDINATE AND RESOLVE CONFLICTS AMONG THE SYSTEMS COMMANDS.

   -- PRIMARY STAFF ROLE SHOULD BE POLICY, PLANNING AND COORDINATION.

   -- ROLE IN CONTRACT REVIEW AND RESOURCE MANAGEMENT SHOULD BE LIMITED -- MOST SHOULD BE DONE BY SYSTEMS COMMANDS.

   -- OPERATIONAL AND TECHNICAL EVALUATION FUNCTIONS SHOULD BE ASSIGNED TO SYSTEMS COMMANDERS, WITH RESULTING STAFF REDUCTIONS IN NAVMAT STAFF.

   -- THE NAVMAT STAFF SHOULD BE REDUCED BY AT LEAST TWO-THIRDS AND RESTRUCTURED TO PERFORM THE NEW ROLE; FOR EXAMPLE, CONSIDER CONSOLIDATING THE SEVEN FUNCTIONAL DEPUTIES, INTO TWO: DEPUTY AND CHIEF OF STAFF; AND DEPUTY FOR POLICY AND PLANNING.

3. THE ROLE OF THE OPNAV STAFF -- PLATFORM SPONSORS, OP-98, OP-09 AND OTHERS -- IN THE DEVELOPMENT-ACQUISITION PROCESS SHOULD BE CLEARLY DEFINED AND LIMITED.

   -- FORMAL GROUNDRULES FOR OPNAV'S INVOLVEMENT IN WEAPON SYSTEM DEVELOPMENT-ACQUISITION MUST BE ESTABLISHED AND FOLLOWED -- INCLUDING A DEFINITION OF "SETTING REQUIREMENTS,"

   -- THE RESPONSIBILITIES OF THE NMC PROJECT MANAGERS AND OPNAV PROJECT COORDINATORS SHOULD BE SPELLED OUT.

4. IMMEDIATE ATTENTION SHOULD BE GIVEN TO EVALUATING THE CIVILIAN PERSONNEL BASE IN NAVMAT.

   -- RETENTION OF TECHNICAL PERSONNEL SHOULD RECEIVE PRIORITY -- PARTICULARLY ENGINEERING AND PROCUREMENT.

   -- CONSIDER USING MILITARY PERSONNEL FOR SOME KEY CIVILIAN POSITIONS.

PRELIMINARY RECOMMENDATIONS (CONTINUED)

-- AN EVALUATION SHOULD BE MADE OF EFFECTIVENESS OF DEVELOPMENT-ACQUISITION ORGANIZATION AND THE MANAGEMENT OF HUMAN RESOURCES IN NAVMAT.

-- "ACROSS-THE-BOARD" CUTS SHOULD NOT BE MADE IN NMC -- RATHER NECESSARY CUTS SHOULD BE MADE SELECTIVELY.

-- IF NECESSARY, ARRANGEMENTS SHOULD BE MADE WITH CSC AND OCMM TO OVERHAUL THE CIVILIAN ORGANIZATION.

5. THE OVERALL CAPABILITY OF THE SYSTEMS COMMANDS SHOULD BE IMPROVED.

-- COMBAT SYSTEM DESIGN, DEVELOPMENT AND ACQUISITION SHOULD BE BETTER INTEGRATED WITH MAJOR SHIP PROJECTS.

-- A SEPARATE LOGISTICS COMMAND SHOULD NOT BE ESTABLISHED; LOGISTICS PLANNING SHOULD BE MORE CLOSELY INTEGRATED WITH DEVELOPMENT-ACQUISITION IN THE HARDWARE SYSTEMS COMMANDS.

-- NAVELEX SHOULD BE RETAINED, BUT ITS MISSION SHOULD BE CLEARLY DEFINED FOR C^3, SHORE ELECTRONICS, INTELLIGENCE PROGRAMS AND CROSS-CUTTING ELECTRONICS PROJECTS; SHIPBOARD ELECTRONICS SHOULD BE TRANSFERRED TO NAVSEA.

-- CONSIDERATION SHOULD BE GIVEN TO INTEGRATING COMPONENTS OF THE NAVAL SUPPLY SYSTEMS COMMAND INTO THE HARDWARE SYSTEMS COMMANDS -- SUCH AS AVIATION SUPPLY OFFICE AND SHIPS PARTS CONTROL CENTER.

-- THE HARDWARE SYSTEMS COMMANDS SHOULD STRENGTHEN THEIR EVALUATION CAPABILITY.

6. PROJECT MANAGER CHARTERS AND ORGANIZATIONS SHOULD BE STRENGTHENED.

-- PROJECT OFFICES SHOULD HAVE A STRONGER PERMANENT ORGANIZATION; HOWEVER, THE MATRIX APPROACH SHOULD BE RETAINED.

-- PROJECT MANAGERS SHOULD BE GIVEN MORE AUTHORITY IN SHIP AND AIRCRAFT DESIGN, DEVELOPMENT AND PROCUREMENT.

PRELIMINARY RECOMMENDATIONS (CONTINUED)

-- THE FEASIBILITY OF USING A MORE VERTICAL ORGANIZATION SHOULD BE TESTED WITH ONE OR MORE MAJOR PROGRAMS (EXHIBIT 8).

-- A SENIOR REPRESENTATIVE OF EACH MAJOR PROJECT SHOULD BE LOCATED AT THE SHIPYARD OR PLANT.

-- THE PROJECT MANAGER SHOULD PREPARE CONCURRENT FITNESS REPORTS OR EVALUATIONS FOR KEY INDIVIDUALS SUPPORTING HIM IN THE FUNCTIONAL ORGANIZATION.

-- PM'S SHOULD BE MADE AWARE THAT OF EXISTING REPROGRAMMING AUTHORITIES, E.G., FROM O&MN AND APN, SCN AND WPN ACCOUNTS.

7. TOP-LEVEL SUPPORT IN THE NAVY SHOULD BE GIVEN TO PROFESSIONAL DEVELOPMENT FOR MILITARY OFFICERS ACQUISITION-DEVELOPMENT, PROCUREMENT AND LOGISTICS MANAGEMENT.

-- OFFICERS IN PROJECT MANAGEMENT ORGANIZATIONS SHOULD BE GIVEN LONGER TOUR LENGTHS WITHOUT PENALIZING CAREER PROMOTION; SUCCESSFUL PROJECT MANAGERS SHOULD BE PROMOTED IN THE JOB.

-- THE WSAM PROGRAM SHOULD BE STRENGTHENED.

-- SENIOR URL OFFICERS (O-5, O-6 AND ABOVE) SHOULD NOT BE ASSIGNED TO NMC WITHOUT PREVIOUS TOURS IN WASHINGTON.

NEXT STEPS

1. CNM REVIEW FINDINGS AND RECOMMENDATIONS

2. OMB AND CNM MEET WITH CNO TO DISCUSS REPORT

3. CNM TAKE SEVERAL IMMEDIATE ACTIONS:

   - SET UP SPECIAL ANALYSIS GROUP REPORTING TO CNM AND VCNM TO WORK ON FURTHER DATA COLLECTION, ANALYSIS AND IMPLEMENTATION ACTIONS.
   - COLLECT DATA ON MATRIX ORGANIZATION AND CONTRACTING SUPPORT.
   - CNM INITIATE ACTIONS TO SOLVE CIVILIAN PERSONNEL PROBLEM.

4. IMPLEMENT OTHER RECOMMENDATIONS.